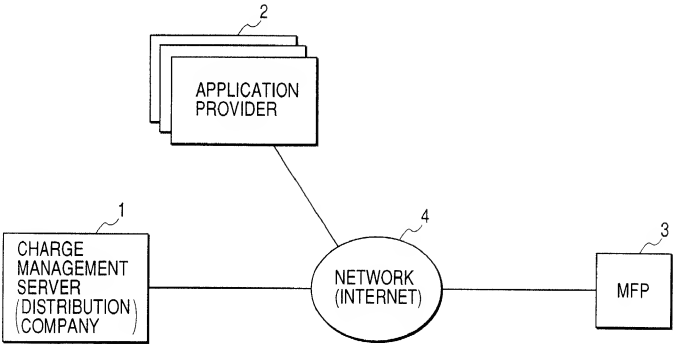
FIG. 1


2
APPLICATION PROVIDER
1
CHARGE MANAGEMENT SERVER (DISTRIBUTION COMPANY)
4
NETWORK (INTERNET)
3
MFP

TOKEN" 2510960

FIG. 2

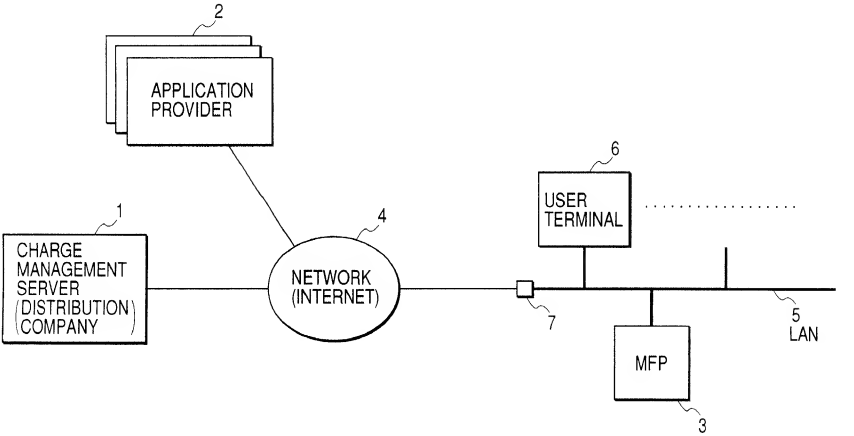


FIG. 3

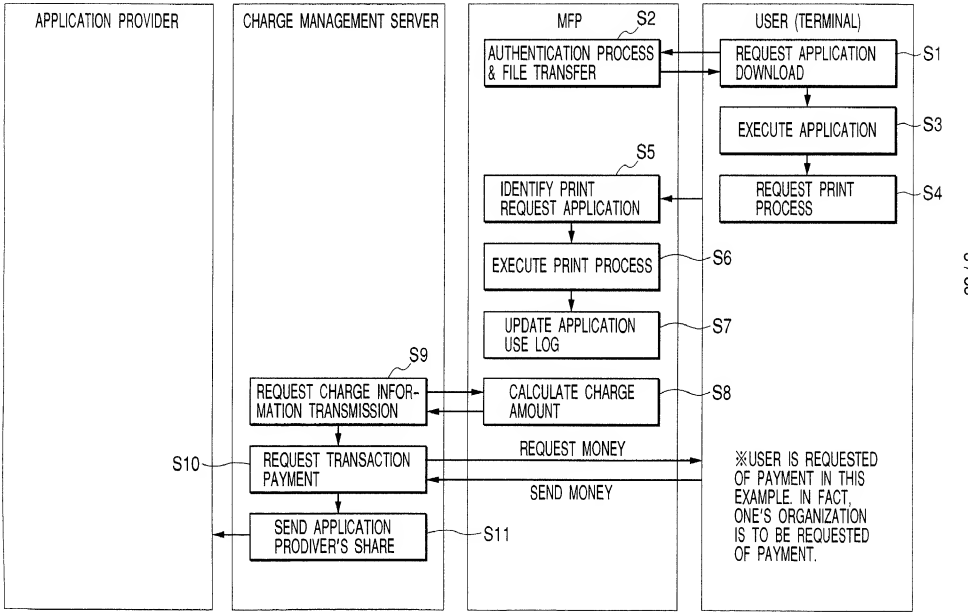

APPLICATION PROVIDER
CHARGE MANAGEMENT SERVER
MFP
USER (TERMINAL)
S2
AUTHENTICATION PROCESS & FILE TRANSFER
REQUEST APPLICATION DOWNLOAD
S1
EXECUTE APPLICATION
S3
S5
IDENTIFY PRINT REQUEST APPLICATION
REQUEST PRINT PROCESS
S4
EXECUTE PRINT PROCESS
S6
UPDATE APPLICATION USE LOG
S7
S9
REQUEST CHARGE INFORMATION TRANSMISSION
CALCULATE CHARGE AMOUNT
S8
S10
REQUEST TRANSACTION PAYMENT
REQUEST MONEY
SEND MONEY
※USER IS REQUESTED OF PAYMENT IN THIS EXAMPLE. IN FACT, ONE'S ORGANIZATION IS TO BE REQUESTED OF PAYMENT.
SEND APPLICATION PRODIVER'S SHARE
S11

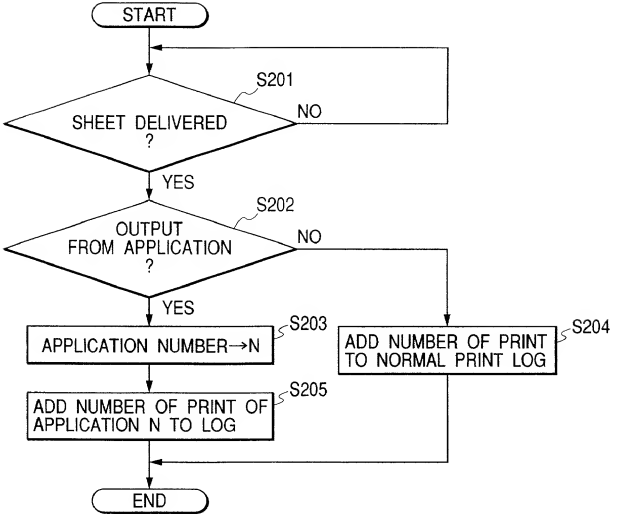
FIG. 4

APPLICATION TYPE	CHARGE AMOUNT PER ONE SHEET (YEN)
NORMAL PRINT	8
APPLICATION A	15
APPLICATION B	30
⋮	⋮
APPLICATION X	80

FIG. 5

APPLICATION TYPE	NUMBER OF PRINT
NORMAL PRINT	3501
APPLICATION A	335
APPLICATION B	678
⋮	⋮
APPLICATION X	23

FIG. 6


START
S201
SHEET DELIVERED ?
NO
YES
S202
OUTPUT FROM APPLICATION ?
NO
YES
S203
APPLICATION NUMBER→N
S204
ADD NUMBER OF PRINT TO NORMAL PRINT LOG
S205
ADD NUMBER OF PRINT OF APPLICATION N TO LOG
END

EP 0 762 297 A1

FIG. 7

APPLICATION TYPE	TOTAL AMOUNT (YEN)	DISTRIBUTION COMPANY'S SHARE (YEN)	PROVIDER'S SHARE (YEN)
NORMAL PRINT	28008	28008	0
APPLICATION A	5025	2680	2345
APPLICATION B	20340	5424	14916
⋮	⋮	⋮	⋮
APPLICATION X	1840	184	1656

FIG. 8

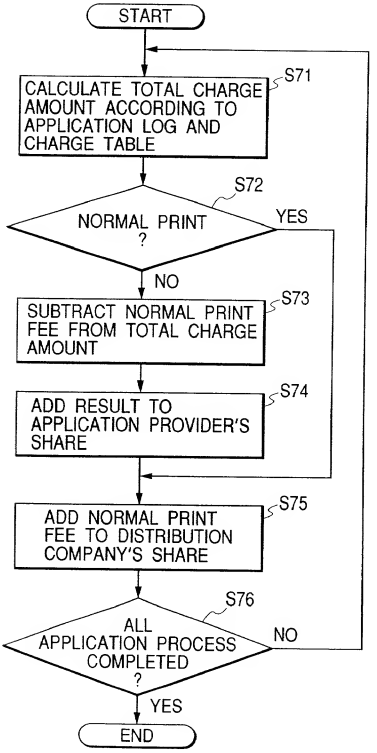

START
CALCULATE TOTAL CHARGE AMOUNT ACCORDING TO APPLICATION LOG AND CHARGE TABLE
S71
NORMAL PRINT ?
S72
YES
NO
SUBTRACT NORMAL PRINT FEE FROM TOTAL CHARGE AMOUNT
S73
ADD RESULT TO APPLICATION PROVIDER'S SHARE
S74
ADD NORMAL PRINT FEE TO DISTRIBUTION COMPANY'S SHARE
S75
ALL APPLICATION PROCESS COMPLETED ?
S76
NO
YES
END

FIG. 9

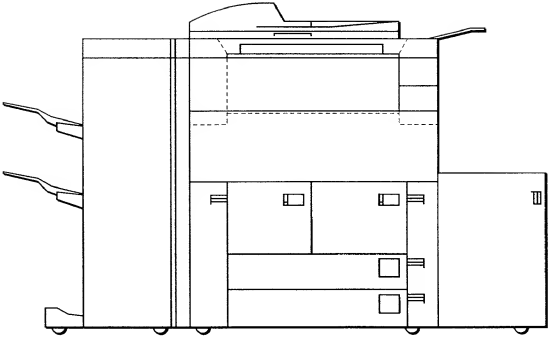


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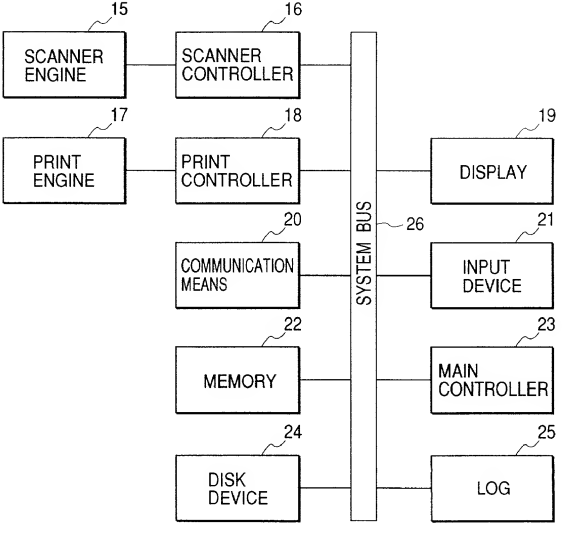
FIG. 10


15
SCANNER ENGINE
16
SCANNER CONTROLLER
17
PRINT ENGINE
18
PRINT CONTROLLER
19
DISPLAY
20
COMMUNICATION MEANS
SYSTEM BUS
26
21
INPUT DEVICE
22
MEMORY
23
MAIN CONTROLLER
24
DISK DEVICE
25
LOG

TOH2HO" ZSTOHB60

FIG. 11

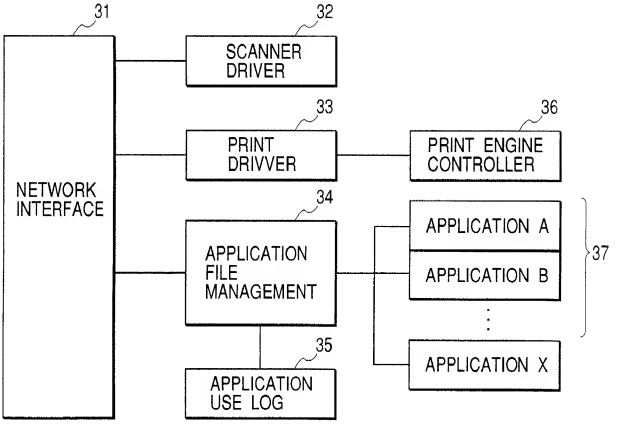


FIG. 12

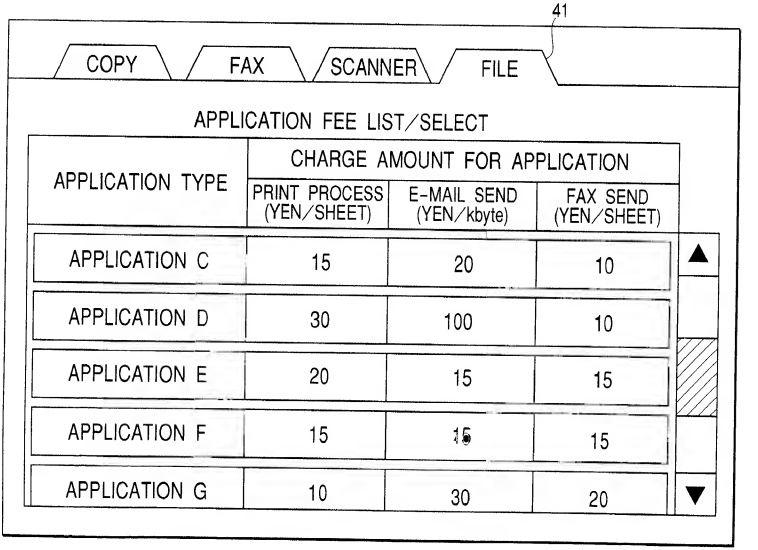

41
COPY
FAX
SCANNER
FILE
APPLICATION FEE LIST/SELECT
APPLICATION TYPE
CHARGE AMOUNT FOR APPLICATION
PRINT PROCESS (YEN/SHEET)
E-MAIL SEND (YEN/kbyte)
FAX SEND (YEN/SHEET)
APPLICATION C 15 20 10
APPLICATION D 30 100 10
APPLICATION E 20 15 15
APPLICATION F 15 15 15
APPLICATION G 10 30 20

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FIG. 13

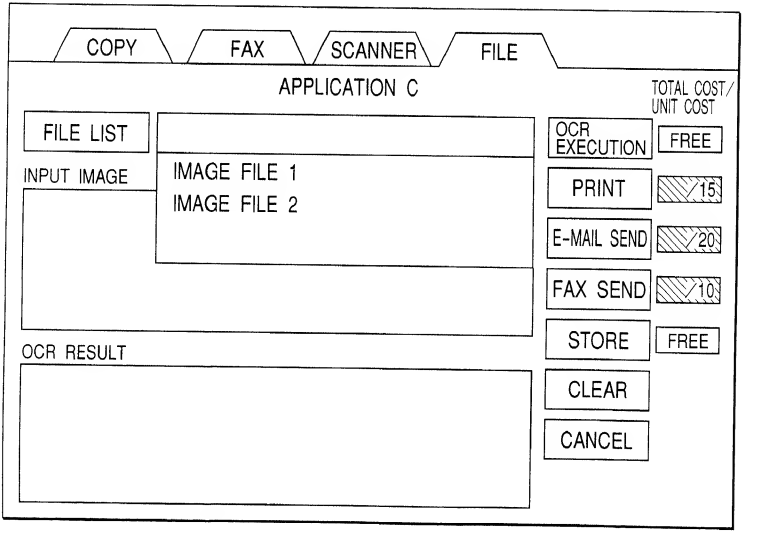

FIG. 14

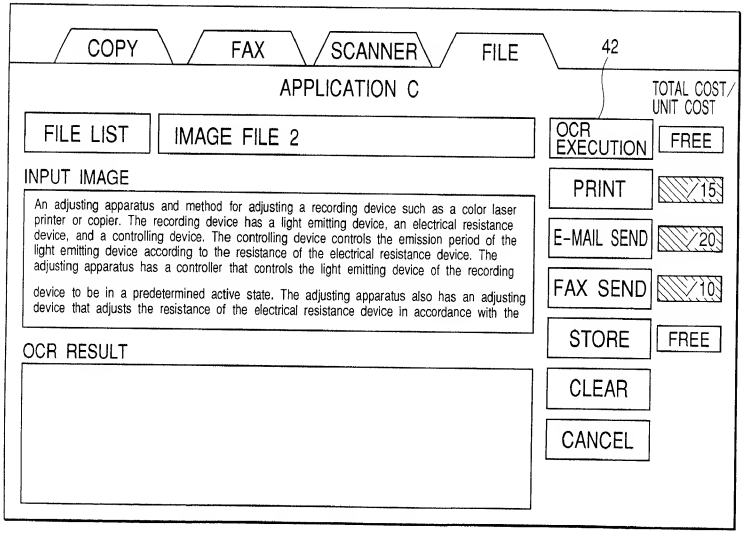
COPY
FAX
SCANNER
FILE
42
APPLICATION C
TOTAL COST/
UNIT COST
FILE LIST
IMAGE FILE 2
OCR EXECUTION
FREE
INPUT IMAGE
An adjusting apparatus and method for adjusting a recording device such as a color laser printer or copier. The recording device has a light emitting device, an electrical resistance device, and a controlling device. The controlling device controls the emission period of the light emitting device according to the resistance of the electrical resistance device. The adjusting apparatus has a controller that controls the light emitting device of the recording device to be in a predetermined active state. The adjusting apparatus also has an adjusting device that adjusts the resistance of the electrical resistance device in accordance with the
PRINT
15
E-MAIL SEND
20
FAX SEND
10
STORE
FREE
OCR RESULT
CLEAR
CANCEL

FIG. 15

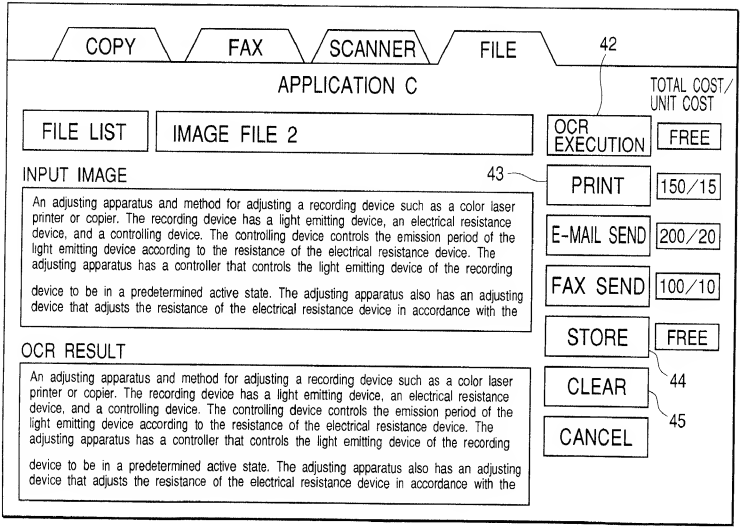
COPY
FAX
SCANNER
FILE
42
APPLICATION C
TOTAL COST/
UNIT COST
FILE LIST
IMAGE FILE 2
OCR EXECUTION
FREE
INPUT IMAGE
43
PRINT
150/15
An adjusting apparatus and method for adjusting a recording device such as a color laser printer or copier. The recording device has a light emitting device, an electrical resistance device, and a controlling device. The controlling device controls the emission period of the light emitting device according to the resistance of the electrical resistance device. The adjusting apparatus has a controller that controls the light emitting device of the recording
E-MAIL SEND
200/20
device to be in a predetermined active state. The adjusting apparatus also has an adjusting device that adjusts the resistance of the electrical resistance device in accordance with the
FAX SEND
100/10
STORE
FREE
OCR RESULT
CLEAR
44
An adjusting apparatus and method for adjusting a recording device such as a color laser printer or copier. The recording device has a light emitting device, an electrical resistance device, and a controlling device. The controlling device controls the emission period of the light emitting device according to the resistance of the electrical resistance device. The adjusting apparatus has a controller that controls the light emitting device of the recording
45
CANCEL
device to be in a predetermined active state. The adjusting apparatus also has an adjusting device that adjusts the resistance of the electrical resistance device in accordance with the

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FIG. 16

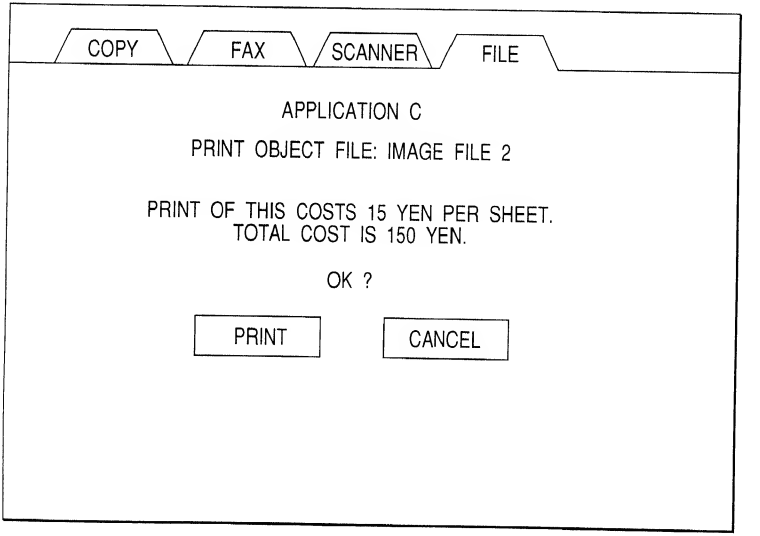

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FIG. 17

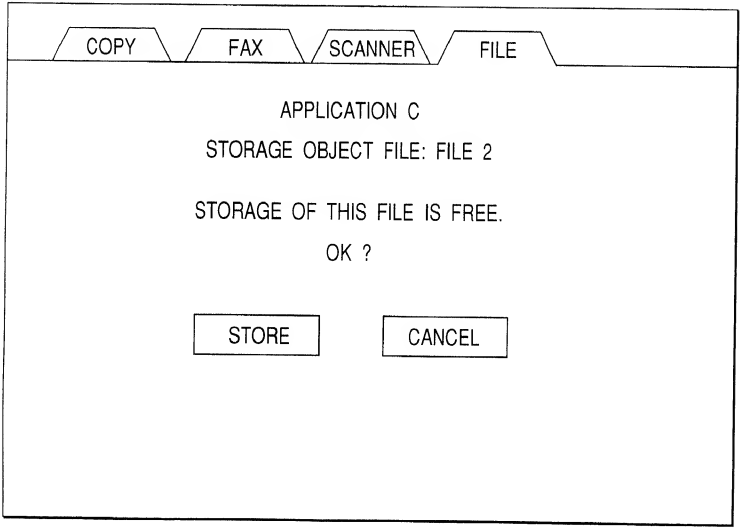

FIG. 18

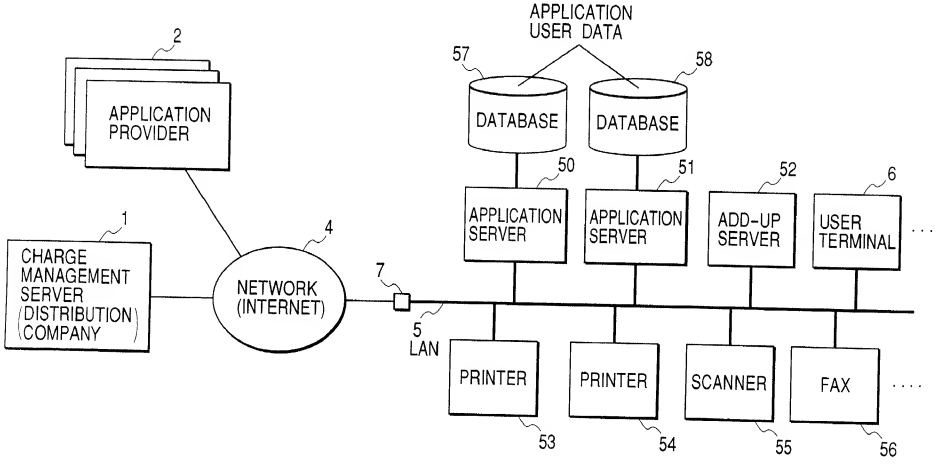
APPLICATION USER DATA
2
APPLICATION PROVIDER
57
58
DATABASE
DATABASE
50
51
52
6
APPLICATION SERVER
APPLICATION SERVER
ADD-UP SERVER
USER TERMINAL
1
4
CHARGE MANAGEMENT SERVER (DISTRIBUTION COMPANY)
NETWORK (INTERNET)
7
5
LAN
PRINTER
PRINTER
SCANNER
FAX
53
54
55
56

FIG. 19

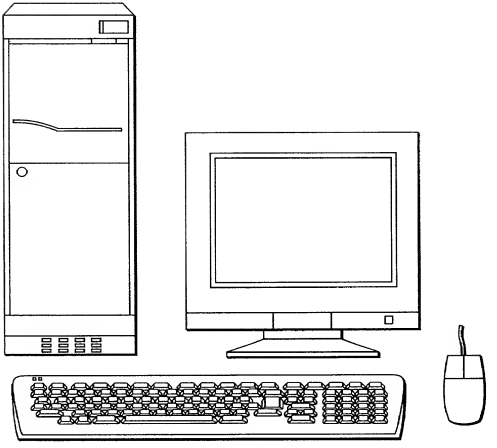

FIG. 20

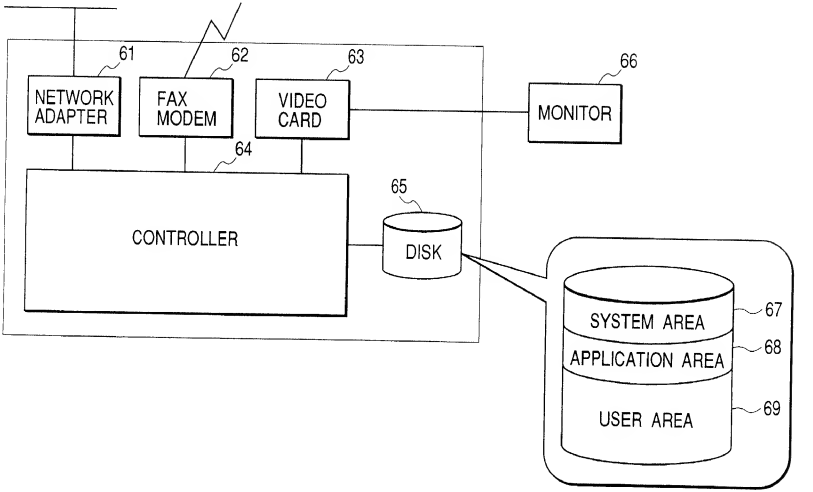
61
62
63
66
NETWORK ADAPTER
FAX MODEM
VIDEO CARD
MONITOR
64
65
CONTROLLER
DISK
SYSTEM AREA
67
APPLICATION AREA
68
USER AREA
69

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FIG. 21

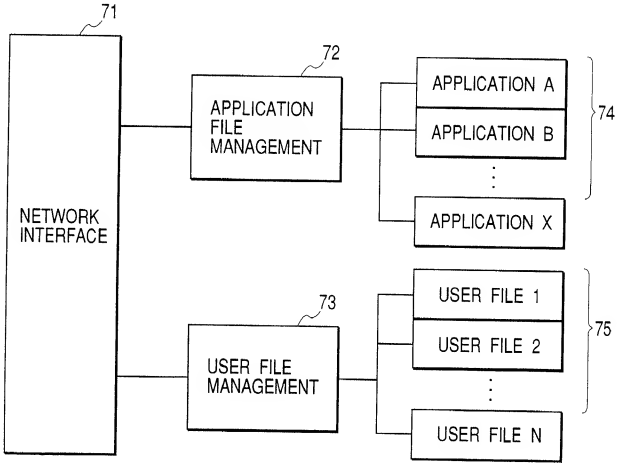


FIG. 22

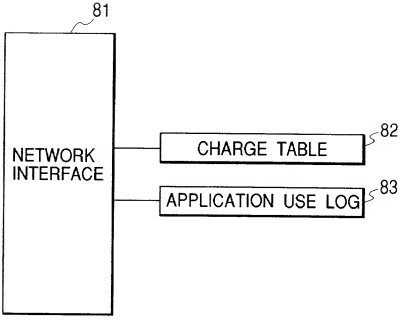

81
NETWORK INTERFACE
CHARGE TABLE
82
APPLICATION USE LOG
83

FIG. 23

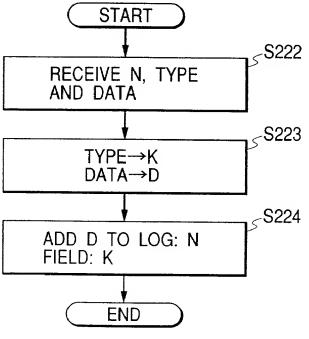

START
RECEIVE N, TYPE AND DATA
S222
TYPE→K
DATA→D
S223
ADD D TO LOG: N
FIELD: K
S224
END

FIG. 24A

STANDARD CHARGE TABLE

APPLICATION TYPE	CHARGE FOR PROCESS			
	PRINT PROCESS (YEN/SHEET)	E-MAIL SEND (YEN/kbyte)	FAX SEND (YEN/SHEET)	CONTENTS RETRIEVAL (TIMES)
APPLICATION A	15	1	10	1000
APPLICATION B	30	100	10	2000
⋮	⋮	⋮	⋮	⋮
APPLICATION X	80	20	20	4000

FIG. 24B

DISCOUNT CHARGE TABLE

APPLICATION TYPE	CHARGE FOR PROCESS			
	PRINT PROCESS (YEN/SHEET)	E-MAIL SEND (YEN/kbyte)	FAX SEND (YEN/SHEET)	CONTENTS RETRIEVAL (TIMES)
APPLICATION A	15	0.8	10	800
APPLICATION B	30	80	10	1600
⋮	⋮	⋮	⋮	⋮
APPLICATION X	80	16	20	3200

FIG. 25

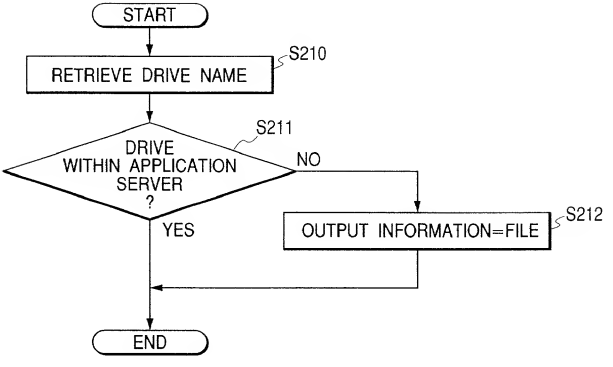

START
RETRIEVE DRIVE NAME
S210
DRIVE WITHIN APPLICATION SERVER ?
S211
NO
YES
OUTPUT INFORMATION=FILE
S212
END

FIG. 26

APPLICATION TYPE	USER ID	PRINT PROCESS (SHEET)	E-MAIL SEND (kbyte)	FAX SEND (SHEET)	CONTENTS RETRIEVAL (TIMES)
APPLICATION A	0001	102	42	13	2
APPLICATION B	0001	32	247	43	0
⋮	⋮	⋮	⋮	⋮	⋮
APPLICATION X	0001	8	335	0	3
APPLICATION A	0002	24	22	35	0
APPLICATION B	0002	24	478	35	4
⋮	⋮	⋮	⋮	⋮	⋮
APPLICATION X	nnnn	7	2	2	1

FIG. 27

APPLICATION TYPE	USER ID	PRINT PROCESS (SHEET)	E-MAIL SEND (kbyte)	FAX SEND (SHEET)	CONTENTS RETRIEVAL (TIMES)	TOTAL (YEN)
APPLICATION A	0001	1530	42	130	2000	3702
APPLICATION B	0001	960	24700	430	0	26822
⋮	⋮	⋮	⋮	⋮	⋮	⋮
APPLICATION X	0001	640	6700	0	12000	19340
APPLICATION A	0002	360	22	350	0	732
APPLICATION B	0002	720	47800	350	8000	56870
⋮	⋮	⋮	⋮	⋮	⋮	⋮
APPLICATION X	nnnn	560	40	40	4000	4640

FIG. 28A

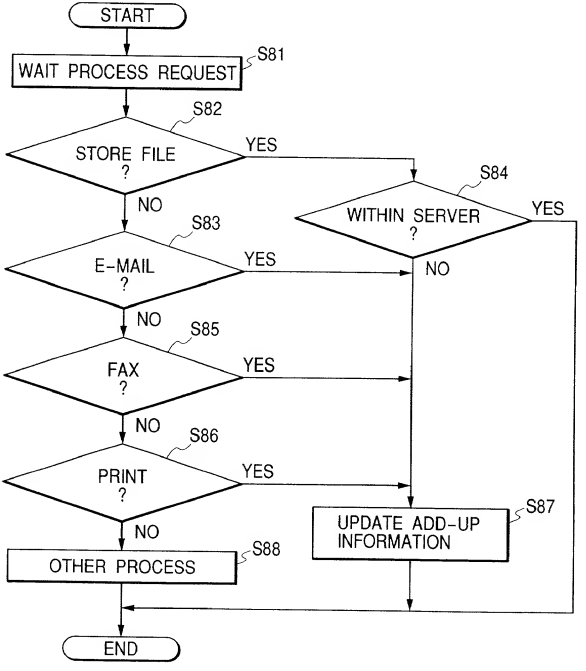

START
WAIT PROCESS REQUEST
S81
S82
STORE FILE ?
YES
NO
S84
WITHIN SERVER ?
YES
NO
S83
E-MAIL ?
YES
NO
S85
FAX ?
YES
NO
S86
PRINT ?
YES
NO
S87
UPDATE ADD-UP INFORMATION
S88
OTHER PROCESS
END

FIG. 28B

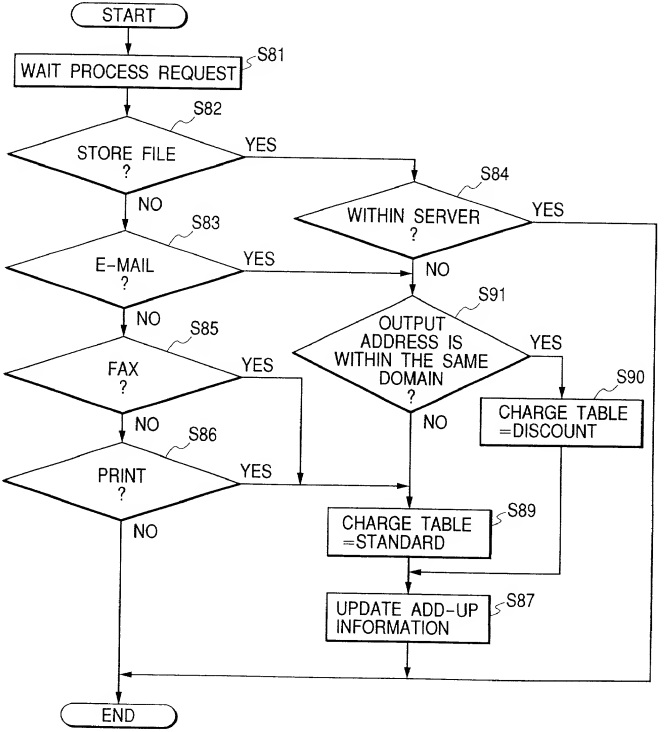

START
WAIT PROCESS REQUEST
S81
STORE FILE ?
S82
YES
NO
E-MAIL ?
S83
YES
NO
FAX ?
S85
YES
NO
PRINT ?
S86
YES
NO
WITHIN SERVER ?
S84
YES
NO
OUTPUT ADDRESS IS WITHIN THE SAME DOMAIN ?
S91
YES
NO
CHARGE TABLE =DISCOUNT
S90
CHARGE TABLE =STANDARD
S89
UPDATE ADD-UP INFORMATION
S87
END

FIG. 29

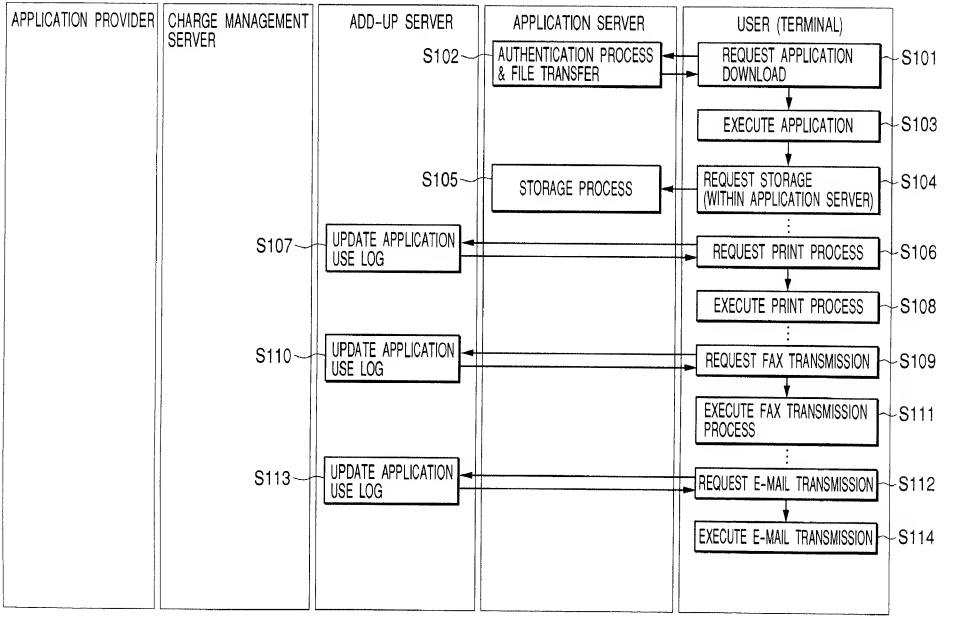

APPLICATION PROVIDER
CHARGE MANAGEMENT SERVER
ADD-UP SERVER
APPLICATION SERVER
USER (TERMINAL)
S102
AUTHENTICATION PROCESS & FILE TRANSFER
REQUEST APPLICATION DOWNLOAD
S101
EXECUTE APPLICATION
S103
S105
STORAGE PROCESS
REQUEST STORAGE (WITHIN APPLICATION SERVER)
S104
S107
UPDATE APPLICATION USE LOG
REQUEST PRINT PROCESS
S106
EXECUTE PRINT PROCESS
S108
S110
UPDATE APPLICATION USE LOG
REQUEST FAX TRANSMISSION
S109
EXECUTE FAX TRANSMISSION PROCESS
S111
S113
UPDATE APPLICATION USE LOG
REQUEST E-MAIL TRANSMISSION
S112
EXECUTE E-MAIL TRANSMISSION
S114

FIG. 30

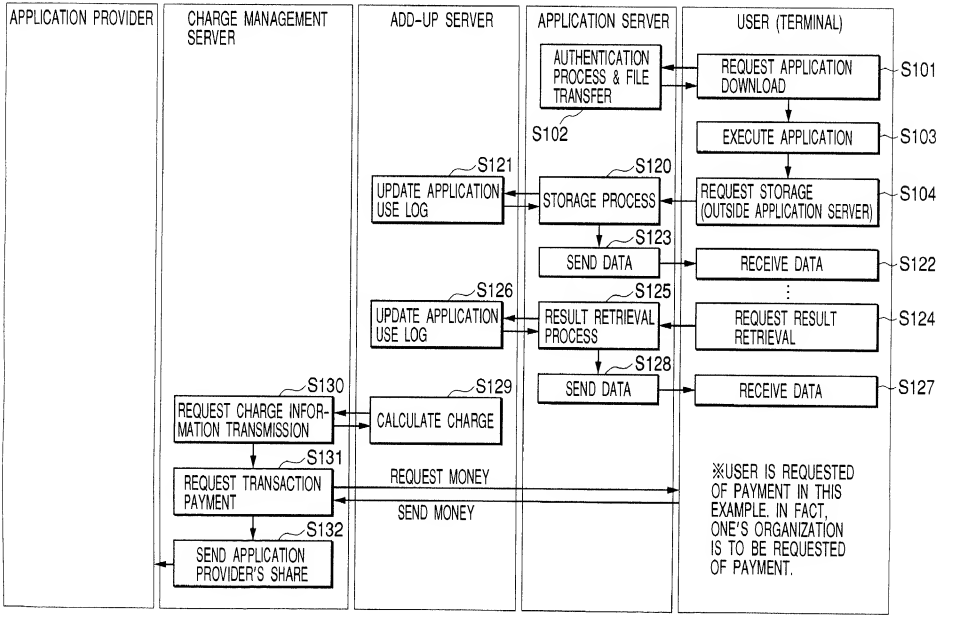

APPLICATION PROVIDER
CHARGE MANAGEMENT SERVER
ADD-UP SERVER
APPLICATION SERVER
USER (TERMINAL)
AUTHENTICATION PROCESS & FILE TRANSFER
REQUEST APPLICATION DOWNLOAD
S101
S102
EXECUTE APPLICATION
S103
S121
S120
UPDATE APPLICATION USE LOG
STORAGE PROCESS
REQUEST STORAGE (OUTSIDE APPLICATION SERVER)
S104
S123
SEND DATA
RECEIVE DATA
S122
S126
S125
UPDATE APPLICATION USE LOG
RESULT RETRIEVAL PROCESS
REQUEST RESULT RETRIEVAL
S124
S128
S130
S129
SEND DATA
RECEIVE DATA
S127
REQUEST CHARGE INFORMATION TRANSMISSION
CALCULATE CHARGE
S131
REQUEST TRANSACTION PAYMENT
REQUEST MONEY
SEND MONEY
※USER IS REQUESTED OF PAYMENT IN THIS EXAMPLE. IN FACT, ONE'S ORGANIZATION IS TO BE REQUESTED OF PAYMENT.
S132
SEND APPLICATION PROVIDER'S SHARE

FIG. 31A

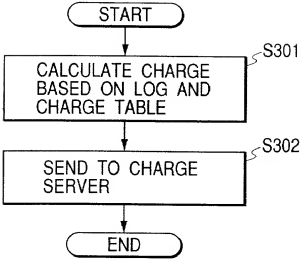


FIG. 31B

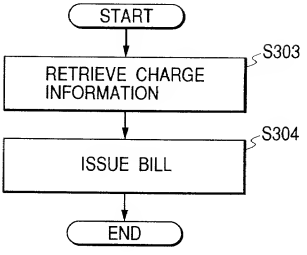
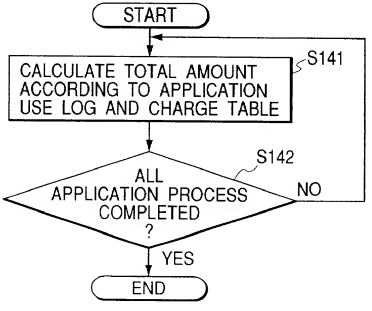


FIG. 32



TOKZHO' ZSTOHS60

FIG. 33

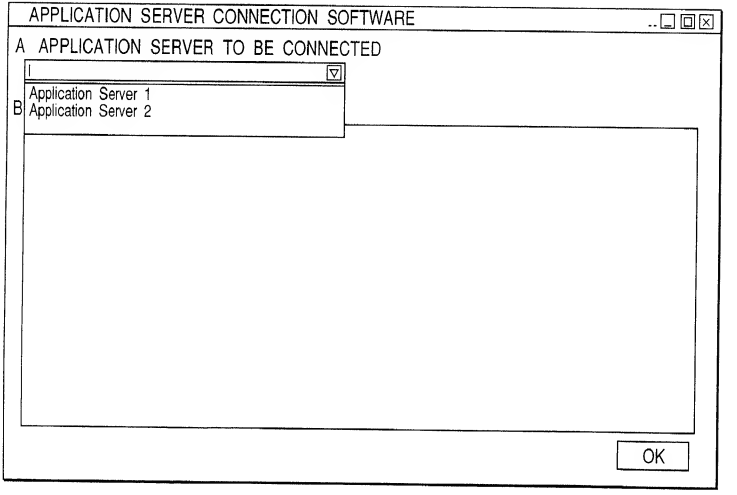


FIG. 34

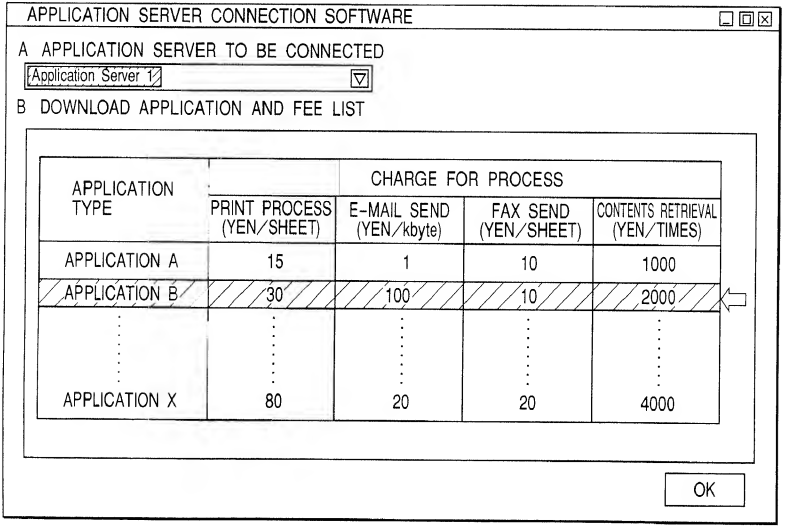

APPLICATION SERVER CONNECTION SOFTWARE
A APPLICATION SERVER TO BE CONNECTED
Application Server 1
B DOWNLOAD APPLICATION AND FEE LIST
APPLICATION TYPE
CHARGE FOR PROCESS
PRINT PROCESS (YEN/SHEET)
E-MAIL SEND (YEN/kbyte)
FAX SEND (YEN/SHEET)
CONTENTS RETRIEVAL (YEN/TIMES)
APPLICATION A
15
1
10
1000
APPLICATION B
30
100
10
2000
APPLICATION X
80
20
20
4000
OK

FIG. 35

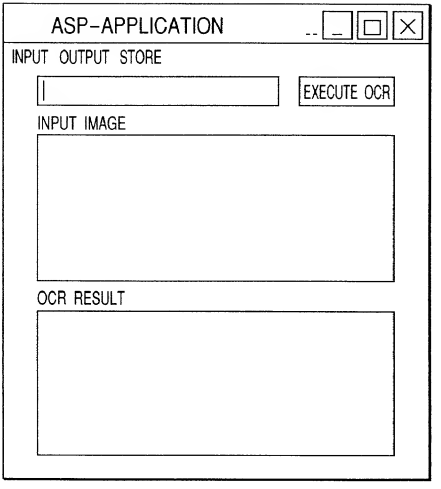

ASP-APPLICATION
INPUT OUTPUT STORE
EXECUTE OCR
INPUT IMAGE
OCR RESULT

FIG. 36

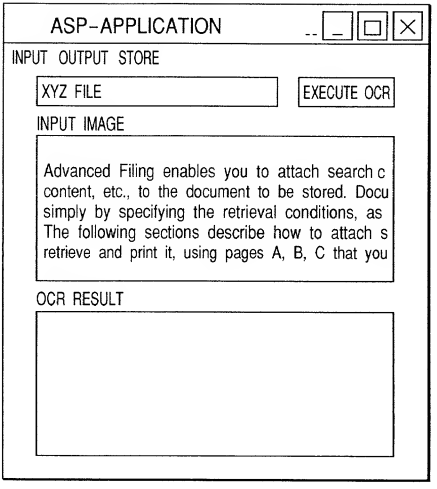

ASP-APPLICATION
INPUT OUTPUT STORE
XYZ FILE
EXECUTE OCR
INPUT IMAGE
Advanced Filing enables you to attach search c
content, etc., to the document to be stored. Docu
simply by specifying the retrieval conditions, as
The following sections describe how to attach s
retrieve and print it, using pages A, B, C that you
OCR RESULT

FIG. 37

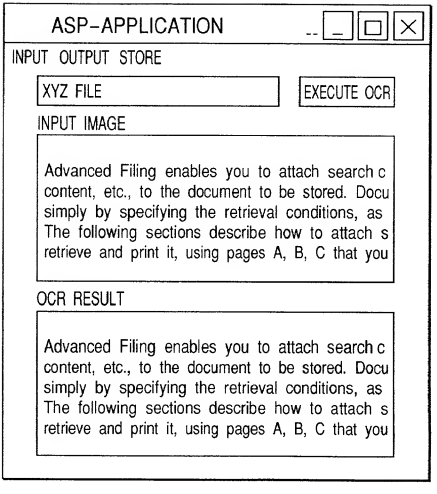

ASP-APPLICATION
INPUT OUTPUT STORE
XYZ FILE
EXECUTE OCR
INPUT IMAGE
Advanced Filing enables you to attach search c
content, etc., to the document to be stored. Docu
simply by specifying the retrieval conditions, as
The following sections describe how to attach s
retrieve and print it, using pages A, B, C that you
OCR RESULT
Advanced Filing enables you to attach search c
content, etc., to the document to be stored. Docu
simply by specifying the retrieval conditions, as
The following sections describe how to attach s
retrieve and print it, using pages A, B, C that you

FIG. 38

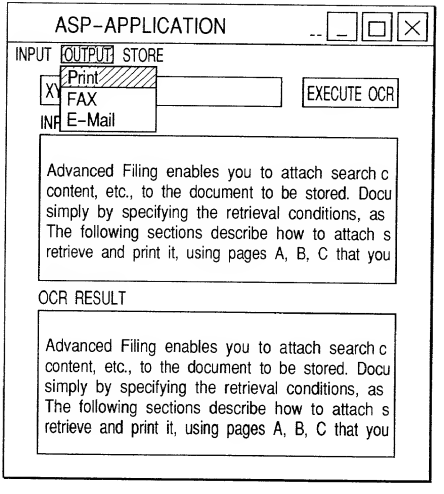

ASP-APPLICATION
INPUT
OUTPUT
STORE
Print
FAX
E-Mail
EXECUTE OCR
Advanced Filing enables you to attach search c
content, etc., to the document to be stored. Docu
simply by specifying the retrieval conditions, as
The following sections describe how to attach s
retrieve and print it, using pages A, B, C that you
OCR RESULT
Advanced Filing enables you to attach search c
content, etc., to the document to be stored. Docu
simply by specifying the retrieval conditions, as
The following sections describe how to attach s
retrieve and print it, using pages A, B, C that you

FIG. 39

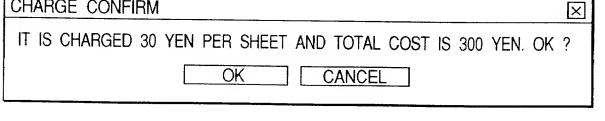

CHARGE CONFIRM
IT IS CHARGED 30 YEN PER SHEET AND TOTAL COST IS 300 YEN. OK ?
OK
CANCEL

FIG. 40

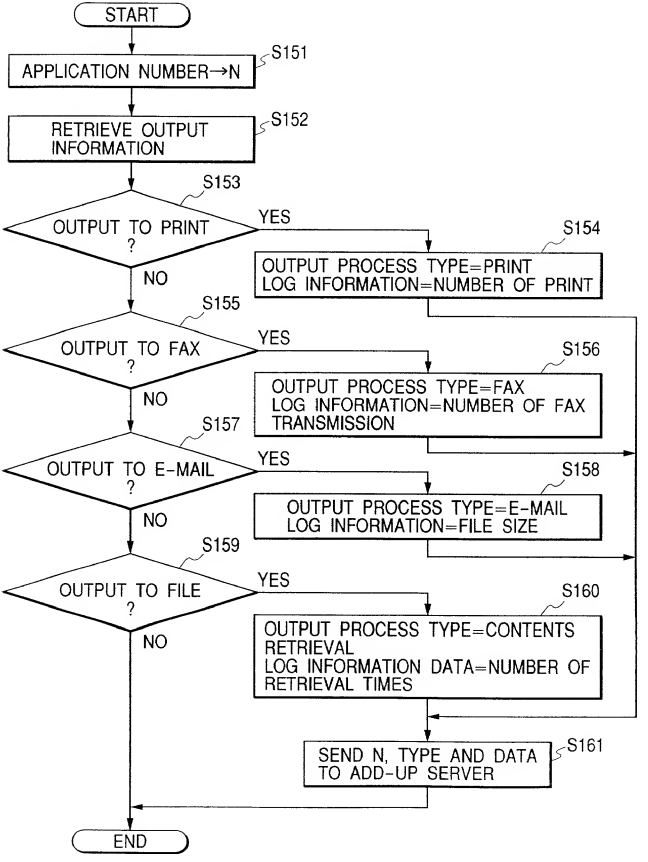

START
APPLICATION NUMBER→N
S151
RETRIEVE OUTPUT INFORMATION
S152
S153
OUTPUT TO PRINT ?
YES
NO
S154
OUTPUT PROCESS TYPE=PRINT
LOG INFORMATION=NUMBER OF PRINT
S155
OUTPUT TO FAX ?
YES
NO
S156
OUTPUT PROCESS TYPE=FAX
LOG INFORMATION=NUMBER OF FAX TRANSMISSION
S157
OUTPUT TO E-MAIL ?
YES
NO
S158
OUTPUT PROCESS TYPE=E-MAIL
LOG INFORMATION=FILE SIZE
S159
OUTPUT TO FILE ?
YES
NO
S160
OUTPUT PROCESS TYPE=CONTENTS RETRIEVAL
LOG INFORMATION DATA=NUMBER OF RETRIEVAL TIMES
SEND N, TYPE AND DATA TO ADD-UP SERVER
S161
END

FIG. 41

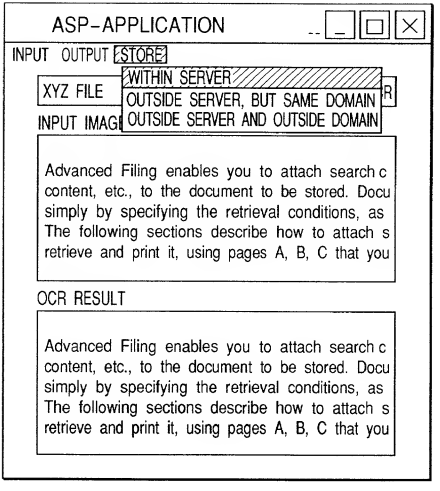

ASP-APPLICATION
INPUT
OUTPUT
STORE
WITHIN SERVER
OUTSIDE SERVER, BUT SAME DOMAIN
OUTSIDE SERVER AND OUTSIDE DOMAIN
XYZ FILE
R
INPUT IMAGE
Advanced Filing enables you to attach search c
content, etc., to the document to be stored. Docu
simply by specifying the retrieval conditions, as
The following sections describe how to attach s
retrieve and print it, using pages A, B, C that you
OCR RESULT
Advanced Filing enables you to attach search c
content, etc., to the document to be stored. Docu
simply by specifying the retrieval conditions, as
The following sections describe how to attach s
retrieve and print it, using pages A, B, C that you

FIG. 42

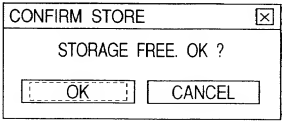
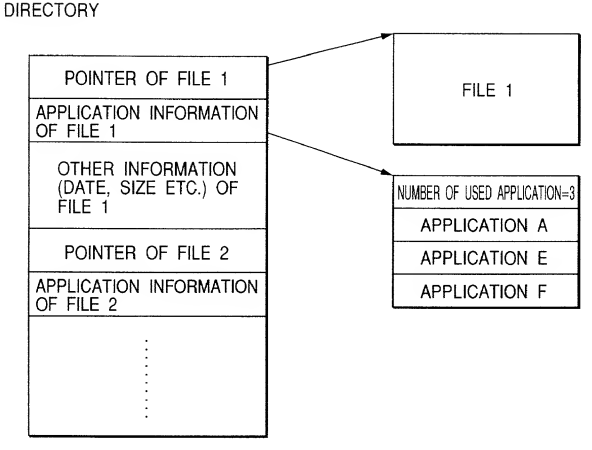

CONFIRM STORE
STORAGE FREE. OK ?
OK
CANCEL

FIG. 43


DIRECTORY
POINTER OF FILE 1
APPLICATION INFORMATION OF FILE 1
OTHER INFORMATION (DATE, SIZE ETC.) OF FILE 1
POINTER OF FILE 2
APPLICATION INFORMATION OF FILE 2
FILE 1
NUMBER OF USED APPLICATION=3
APPLICATION A
APPLICATION E
APPLICATION F

TOKEN: 2STOP=860

FIG. 44

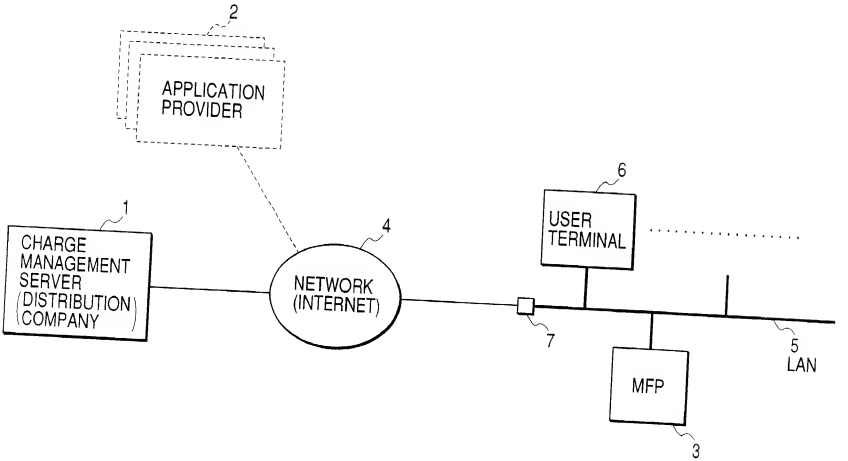


FIG. 45

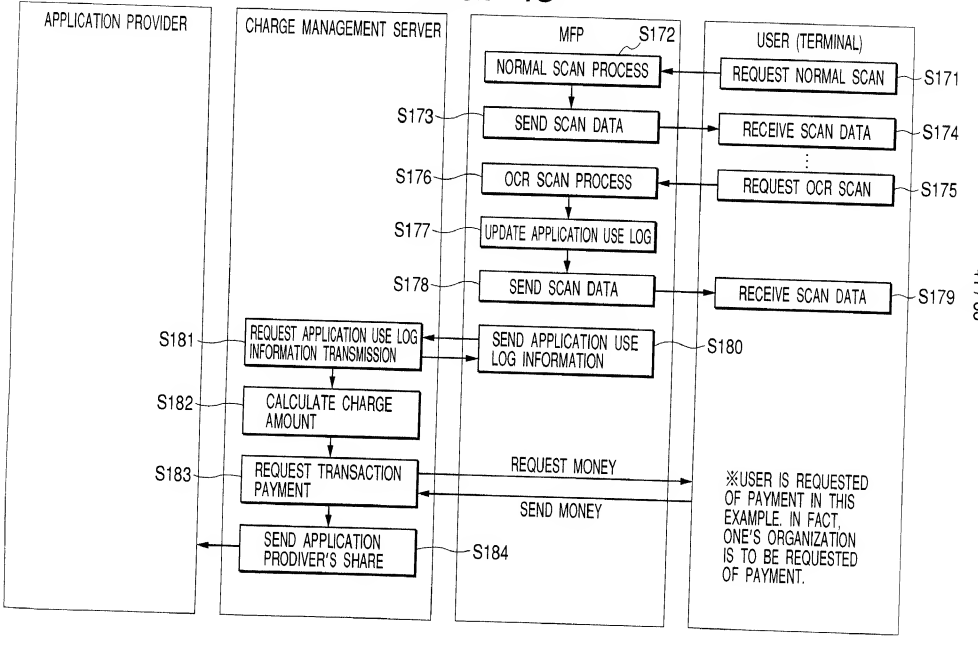

APPLICATION PROVIDER
CHARGE MANAGEMENT SERVER
MFP
S172
USER (TERMINAL)
NORMAL SCAN PROCESS
REQUEST NORMAL SCAN
S171
S173
SEND SCAN DATA
RECEIVE SCAN DATA
S174
S176
OCR SCAN PROCESS
REQUEST OCR SCAN
S175
S177
UPDATE APPLICATION USE LOG
S178
SEND SCAN DATA
RECEIVE SCAN DATA
S179
S181
REQUEST APPLICATION USE LOG INFORMATION TRANSMISSION
SEND APPLICATION USE LOG INFORMATION
S180
S182
CALCULATE CHARGE AMOUNT
S183
REQUEST TRANSACTION PAYMENT
REQUEST MONEY
※USER IS REQUESTED OF PAYMENT IN THIS EXAMPLE. IN FACT, ONE'S ORGANIZATION IS TO BE REQUESTED OF PAYMENT.
SEND MONEY
SEND APPLICATION PRODIVER'S SHARE
S184

FIG. 46

APPLICATION TYPE	FEE FOR ONE IMPRESSION (YEN)
NORMAL SCAN	0
OCR	100
COLOR IMAGE PROCESS	30
⋮	⋮
APPLICATION X	500

FIG. 47

APPLICATION TYPE	NUMBER OF SCAN IMPRESSION
NORMAL SCAN	335
OCR	258
COLOR IMAGE PROCESS	441
⋮	⋮
APPLICATION X	50

FIG. 48

APPLICATION TYPE	TOTAL AMOUNT (YEN)
NORMAL SCAN	0
OCR	25800
COLOR IMAGE PROCESS	13230
⋮	⋮
APPLICATION X	25000

FIG. 49

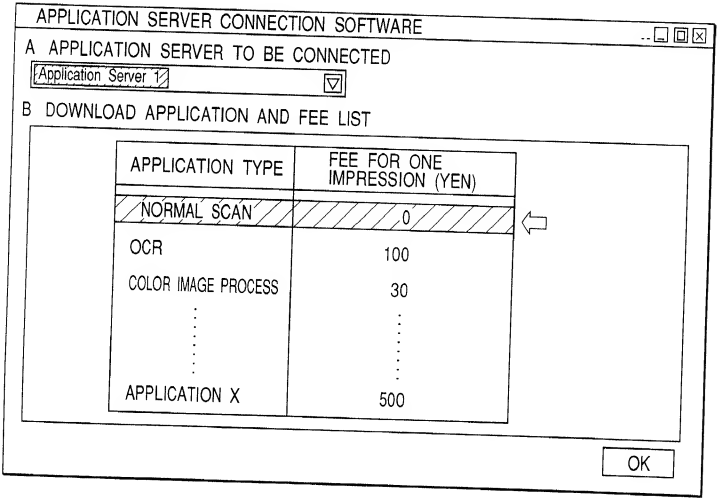

APPLICATION SERVER CONNECTION SOFTWARE
A APPLICATION SERVER TO BE CONNECTED
Application Server 1
B DOWNLOAD APPLICATION AND FEE LIST
APPLICATION TYPE
FEE FOR ONE IMPRESSION (YEN)
NORMAL SCAN
0
OCR
100
COLOR IMAGE PROCESS
30
APPLICATION X
500
OK

FIG. 50

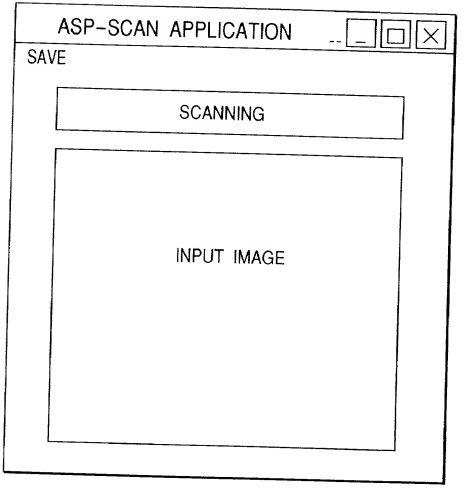


FIG. 51

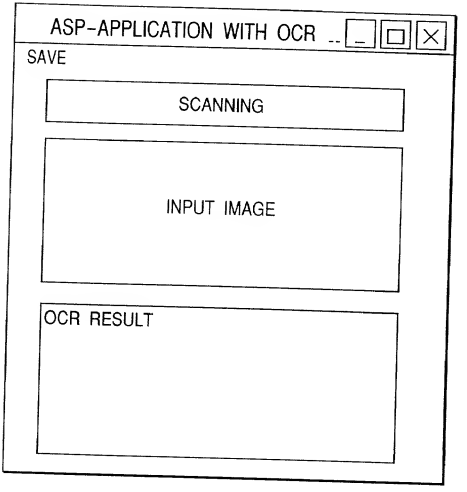
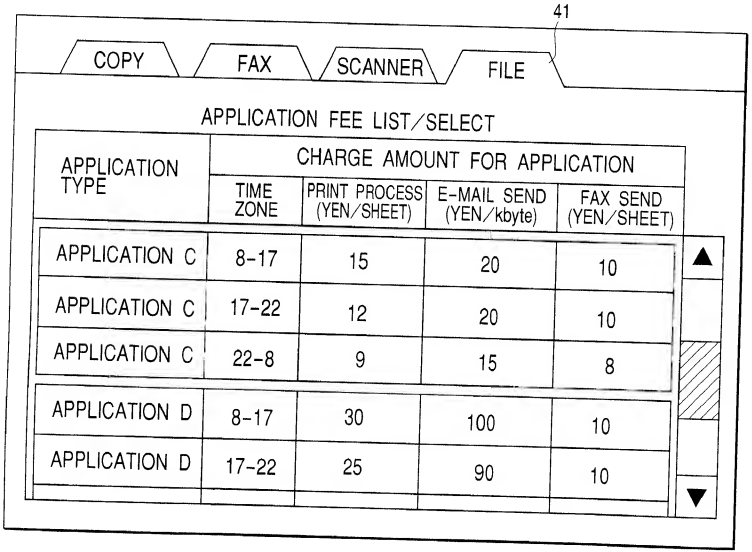

ASP-APPLICATION WITH OCR
SAVE
SCANNING
INPUT IMAGE
OCR RESULT

FIG. 52

APPLICATION TYPE	OPERATING TIME ZONE	CHARGE AMOUNT PER ONE SHEET (YEN)
NORMAL PRINT	8-17 O'CLOCK	8
	17-22 O'CLOCK	6
	22-8 O'CLOCK	4
APPLICATION A	8-17 O'CLOCK	15
	17-22 O'CLOCK	12
	22-8 O'CLOCK	8
APPLICATION B	8-17 O'CLOCK	30
	17-22 O'CLOCK	25
	22-8 O'CLOCK	15
⋮		⋮
APPLICATION X	8-17 O'CLOCK	80
	17-22 O'CLOCK	75
	22-8 O'CLOCK	60

FIG. 53



APPLICATION TYPE	CHARGE AMOUNT FOR APPLICATION			
	TIME ZONE	PRINT PROCESS (YEN/SHEET)	E-MAIL SEND (YEN/kbyte)	FAX SEND (YEN/SHEET)
APPLICATION C	8-17	15	20	10
APPLICATION C	17-22	12	20	10
APPLICATION C	22-8	9	15	8
APPLICATION D	8-17	30	100	10
APPLICATION D	17-22	25	90	10

FIG. 54

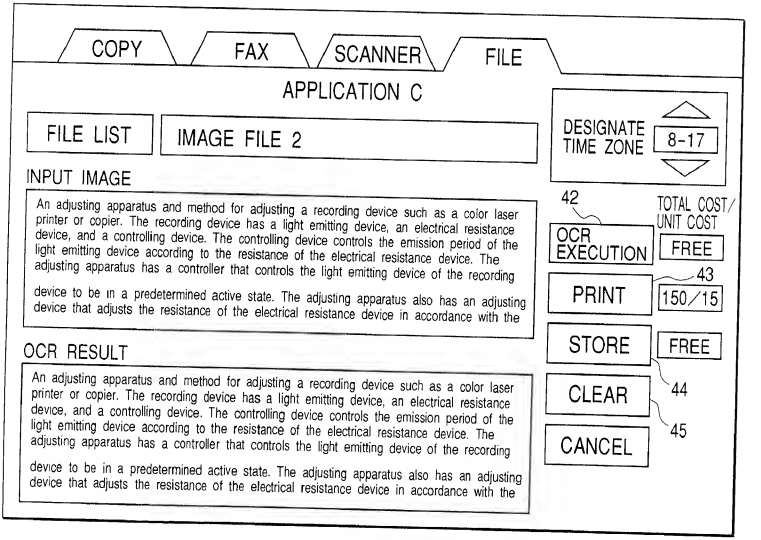

COPY
FAX
SCANNER
FILE
APPLICATION C
FILE LIST
IMAGE FILE 2
DESIGNATE TIME ZONE
8-17
INPUT IMAGE
An adjusting apparatus and method for adjusting a recording device such as a color laser printer or copier. The recording device has a light emitting device, an electrical resistance device, and a controlling device. The controlling device controls the emission period of the light emitting device according to the resistance of the electrical resistance device. The adjusting apparatus has a controller that controls the light emitting device of the recording device to be in a predetermined active state. The adjusting apparatus also has an adjusting device that adjusts the resistance of the electrical resistance device in accordance with the
OCR RESULT
An adjusting apparatus and method for adjusting a recording device such as a color laser printer or copier. The recording device has a light emitting device, an electrical resistance device, and a controlling device. The controlling device controls the emission period of the light emitting device according to the resistance of the electrical resistance device. The adjusting apparatus has a controller that controls the light emitting device of the recording device to be in a predetermined active state. The adjusting apparatus also has an adjusting device that adjusts the resistance of the electrical resistance device in accordance with the
42
TOTAL COST/ UNIT COST
OCR EXECUTION
FREE
43
PRINT
150/15
STORE
FREE
CLEAR
44
CANCEL
45

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FIG. 55

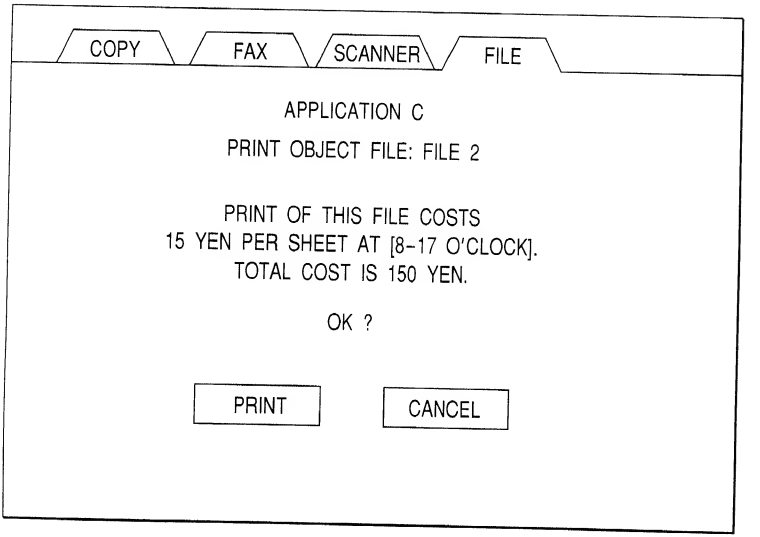

FIG. 56

APPLICATION TYPE	OPERATING TIME ZONE	NUMBER OF PRINT
NORMAL PRINT	8-17 O'CLOCK	3501
	17-22 O'CLOCK	205
	22-8 O'CLOCK	115
APPLICATION A	8-17 O'CLOCK	335
	17-22 O'CLOCK	20
	22-8 O'CLOCK	11
APPLICATION B	8-17 O'CLOCK	678
	17-22 O'CLOCK	50
	22-8 O'CLOCK	32
⋮		⋮
APPLICATION X	8-17 O'CLOCK	23
	17-22 O'CLOCK	40
	22-8 O'CLOCK	11

FIG. 57

APPLICATION TYPE	OPERATING TIME ZONE	TOTAL AMOUNT (YEN)	DISTRIBUTION COMPANY'S SHARE (YEN)	PROVIDER'S SHARE (YEN)
NORMAL PRINT	8-17 O'CLOCK	28008	28008	0
	17-22 O'CLOCK	1230	1230	0
	22-8 O'CLOCK	460	460	0
APPLICATION A	8-17 O'CLOCK	5025	2680	2345
	17-22 O'CLOCK	240	120	120
	22-8 O'CLOCK	88	44	44
APPLICATION B	8-17 O'CLOCK	20340	5424	14916
	17-22 O'CLOCK	1250	300	950
	22-8 O'CLOCK	480	128	352
⋮		⋮	⋮	⋮
APPLICATION X	8-17 O'CLOCK	1840	184	1656
	17-22 O'CLOCK	3000	240	2760
	22-8 O'CLOCK	660	44	616

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FIG. 58A

STANDARD CHARGE TABLE

APPLICATION TYPE	OPERATING TIME ZONE	CHARGE FOR PROCESS			
		PRINT PROCESS (YEN/SHEET)	E-MAIL SEND (YEN/kbyte)	FAX SEND (YEN/SHEET)	CONTENTS RETRIEVAL (TIMES)
APPLICATION A	8-17 O'CLOCK	15	1	10	1000
	17-22 O'CLOCK	12	0.9	10	950
	22-8 O'CLOCK	8	0.8	10	900
APPLICATION B	8-17 O'CLOCK	30	100	10	2000
	17-22 O'CLOCK	25	90	10	1900
	22-8 O'CLOCK	15	80	10	1800
⋮		⋮	⋮	⋮	⋮
APPLICATION X	8-17 O'CLOCK	80	20	20	4000
	17-22 O'CLOCK	75	18	20	3800
	22-8 O'CLOCK	60	16	20	3600

FIG. 58B

DISCOUNT CHARGE TABLE

APPLICATION TYPE	OPERATING TIME ZONE	CHARGE FOR PROCESS			
		PRINT PROCESS (YEN/SHEET)	E-MAIL SEND (YEN/kbyte)	FAX SEND (YEN/SHEET)	CONTENTS RETRIEVAL (TIMES)
APPLICATION A	8-17 O'CLOCK	15	0.8	10	800
	17-22 O'CLOCK	12	0.7	10	750
	22-8 O'CLOCK	8	0.6	10	700
APPLICATION B	8-17 O'CLOCK	30	80	10	1600
	17-22 O'CLOCK	25	72	10	1500
	22-8 O'CLOCK	15	65	10	1400
⋮		⋮	⋮	⋮	⋮
APPLICATION X	8-17 O'CLOCK	80	16	20	3200
	17-22 O'CLOCK	75	14	20	3000
	22-8 O'CLOCK	60	12	20	2800

FIG. 59

APPLICATION TYPE	USER ID	OPERATING TIME ZONE	PRINT PROCESS (SHEET)	E-MAIL SEND (kbyte)	FAX SEND (SHEET)	CONTENTS RETRIEVAL (TIMES)
APPLICATION A	0001	8-17 O'CLOCK 17-22 O'CLOCK 22-8 O'CLOCK	102 0 0	42 0 0	13 0 0	2 0 0
APPLICATION B	0001	8-17 O'CLOCK 17-22 O'CLOCK 22-8 O'CLOCK	32 0 0	247 0 0	43 0 0	0 0 0
⋮	⋮		⋮	⋮	⋮	⋮
APPLICATION X	0001	8-17 O'CLOCK 17-22 O'CLOCK 22-8 O'CLOCK	8 0 0	335 0 0	0 0 0	3 0 0
APPLICATION A	0002	8-17 O'CLOCK 17-22 O'CLOCK 22-8 O'CLOCK	24 0 0	22 0 0	35 0 0	0 0 0
APPLICATION B	0002	8-17 O'CLOCK 17-22 O'CLOCK 22-8 O'CLOCK	24 0 0	478 0 0	35 0 0	4 0 0
⋮	⋮		⋮	⋮	⋮	⋮
APPLICATION X	nnnn	8-17 O'CLOCK 17-22 O'CLOCK 22-8 O'CLOCK	7 0 0	2 0 0	2 0 0	1 0 0

FIG. 60

APPLICATION TYPE	OPERATING TIME ZONE	FEE FOR ONE IMPRESSION (YEN)
NORMAL SCAN	8-17 O'CLOCK	0
	17-22 O'CLOCK	0
	22-8 O'CLOCK	0
OCR	8-17 O'CLOCK	100
	17-22 O'CLOCK	80
	22-8 O'CLOCK	60
COLOR IMAGE PROCESS	8-17 O'CLOCK	30
	17-22 O'CLOCK	20
	22-8 O'CLOCK	10
⋮		⋮
APPLICATION X	8-17 O'CLOCK	500
	17-22 O'CLOCK	450
	22-8 O'CLOCK	400

FIG. 61

APPLICATION TYPE	OPERATING TIME ZONE	NUMBER OF SCAN IMPRESSION
NORMAL SCAN	8-17 O'CLOCK	335
	17-22 O'CLOCK	0
	22-8 O'CLOCK	0
OCR	8-17 O'CLOCK	258
	17-22 O'CLOCK	30
	22-8 O'CLOCK	0
COLOR IMAGE PROCESS	8-17 O'CLOCK	441
	17-22 O'CLOCK	4
	22-8 O'CLOCK	4
⋮		⋮
APPLICATION X	8-17 O'CLOCK	50
	17-22 O'CLOCK	0
	22-8 O'CLOCK	10

FIG. 62

APPLICATION TYPE	OPERATING TIME ZONE	TOTAL AMOUNT (YEN)
NORMAL SCAN	8-17 O'CLOCK	0
	17-22 O'CLOCK	0
	22-8 O'CLOCK	0
OCR	8-17 O'CLOCK	25800
	17-22 O'CLOCK	2400
	22-8 O'CLOCK	0
COLOR IMAGE PROCESS	8-17 O'CLOCK	13230
	17-22 O'CLOCK	80
	22-8 O'CLOCK	40
⋮		⋮
APPLICATION X	8-17 O'CLOCK	25000
	17-22 O'CLOCK	0
	22-8 O'CLOCK	4000

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FIG. 63

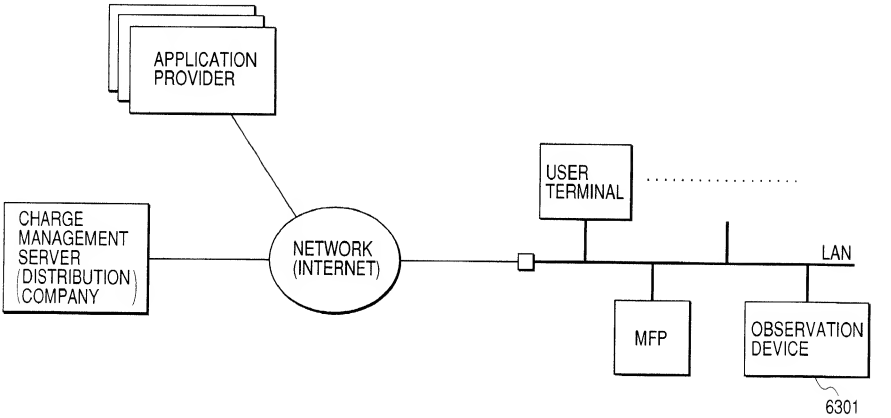

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FIG. 64

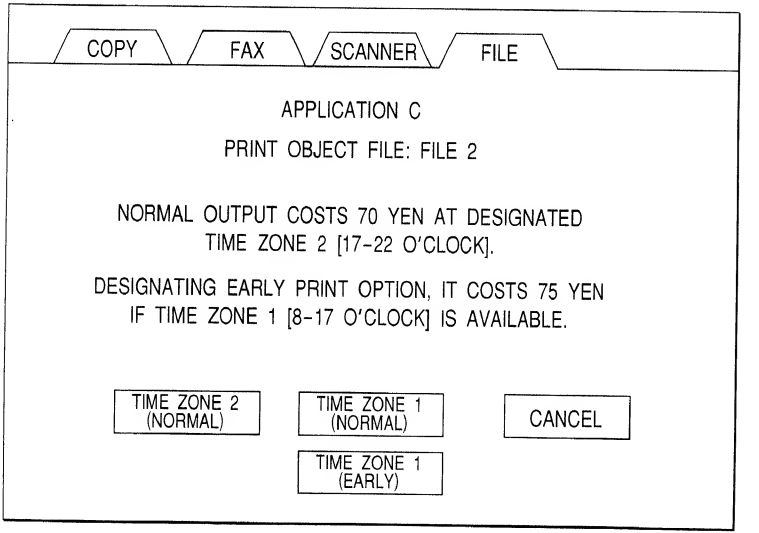


FIG. 65

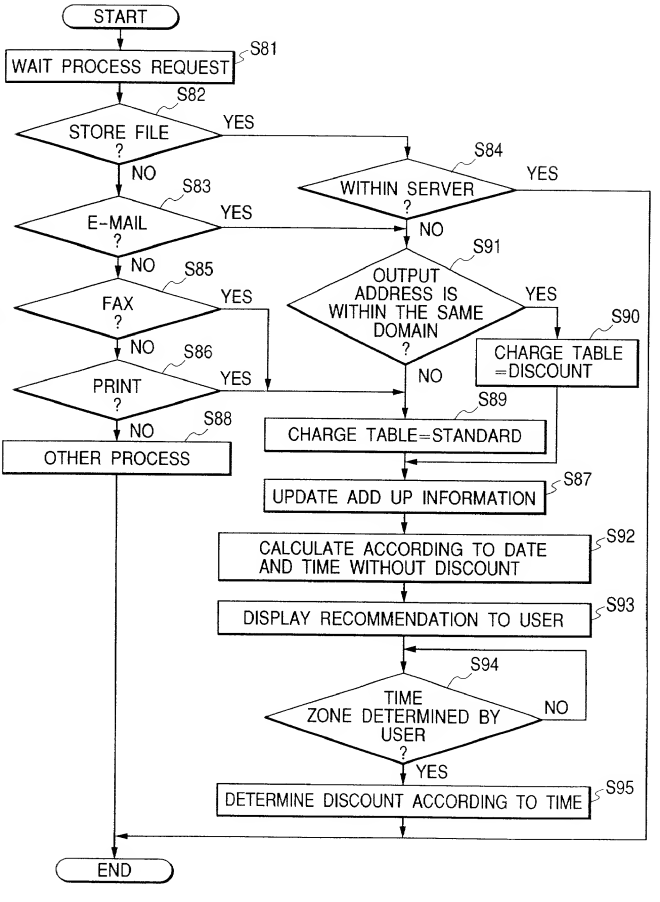
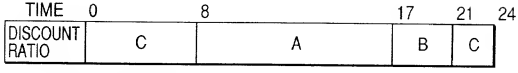

START
WAIT PROCESS REQUEST
S81
STORE FILE ?
S82
YES
NO
E-MAIL ?
S83
YES
NO
FAX ?
S85
YES
NO
PRINT ?
S86
YES
NO
OTHER PROCESS
S88
WITHIN SERVER ?
S84
YES
NO
OUTPUT ADDRESS IS WITHIN THE SAME DOMAIN ?
S91
YES
NO
CHARGE TABLE =DISCOUNT
S90
CHARGE TABLE=STANDARD
S89
UPDATE ADD UP INFORMATION
S87
CALCULATE ACCORDING TO DATE AND TIME WITHOUT DISCOUNT
S92
DISPLAY RECOMMENDATION TO USER
S93
TIME ZONE DETERMINED BY USER ?
S94
NO
YES
DETERMINE DISCOUNT ACCORDING TO TIME
S95
END

FIG. 66A



A: NO DISCOUNT
B: 20% OFF
C: 40% OFF

FIG. 66B

	MON	TUE	WED	THU	FRI	SAT	SUN
DISCOUNT RATIO	a				b	c	

a: NO DISCOUNT
b: 10% OFF
c: 30% OFF

FIG. 67

FEE SELECTION SCREEN

PRESENT TIME AND DATE: 2000/06/27 TUE 14:30 FEE: AAAA YEN

	FEE	DISCOUNT RATIO
○ OUTPUT NOW	AAAA YEN	NONE
○ OUTPUT BY TODAY'S 21 O'CLOCK	BBBB YEN	20%
● OUTPUT BY TOMORROW'S MORNING	CCCC YEN	40%
○ OUTPUT BY NEXT MONDAY	DDDD YEN	58%
○ DESIGNATED TIME BY □O'CLOCK OF □DAY (□DAY OF THE WEEK)	EEEE YEN	XX%

FIG. 68

	BASIC APPLICATION TYPE	CHARGE AMOUNT PER ONE SHEET OF BASIC APPLICATION (YEN)	CHARGE AMOUNT PER ONE SHEET OF SUB APPLICATION CORRESPONDING TO EACH BASIC APPLICATION (YEN)							
			NORMAL PRINT	APPLICATION A	APPLICATION B	APPLICATION C	APPLICATION D	APPLICATION E	———	APPLICATION N
COMPANY	NORMAL PRINT	8	—	15	30	25	36	18	———	80
X COMPANY	APPLICATION A	15	8	—	28	20	36	18	———	80
	APPLICATION B	30	8	14	—	22	36	18	———	80
	APPLICATION C	25	8	14	20	—	36	18	———	80
Y COMPANY	APPLICATION D	36	8	15	30	25	···	16	———	80
	APPLICATION E	18	8	15	30	25	34	···	———	80
	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋱	⋮
Z COMPANY	APPLICATION N	80	8	15	30	25	36	18	———	···

FIG. 69

APPLICATION TYPE	NUMBER OF BASIC APPLICATION PRINT	NUMBER OF PRINT (SHEETS)						
		NUMBER OF SUB APPLICATION PRINT AT EACH BASIC APPLICATION PRINT						
		NORMAL PRINT	APPLICATION A	APPLICATION B	APPLICATION C	APPLICATION D	APPLICATION E	APPLICATION N
NORMAL PRINT	3180	···	2	0	15	0	0	0
APPLICATION A	1442	0	···	31	102	45	2	31
APPLICATION B	180	0	3	···	5	42	0	0
APPLICATION C	2228	0	25	102	···	0	51	23
APPLICATION D	1080	0	0	33	2	···	3	21
APPLICATION E	557	0	21	43	56	2	···	31
APPLICATION N	712	0	35	0	41	78	32	···

FIG. 70

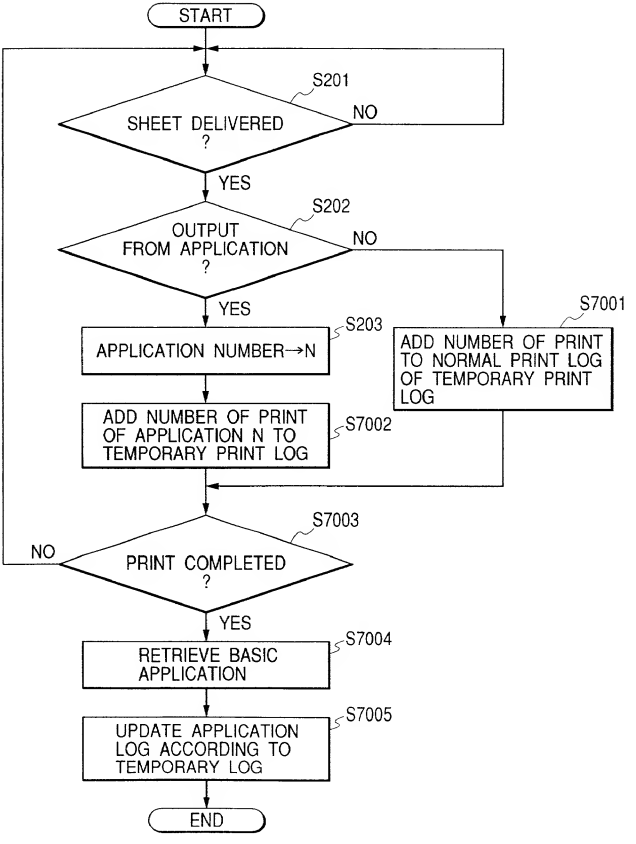

START
S201
SHEET DELIVERED ?
NO
YES
S202
OUTPUT FROM APPLICATION ?
NO
YES
S203
APPLICATION NUMBER→N
S7001
ADD NUMBER OF PRINT TO NORMAL PRINT LOG OF TEMPORARY PRINT LOG
ADD NUMBER OF PRINT OF APPLICATION N TO TEMPORARY PRINT LOG
S7002
S7003
NO
PRINT COMPLETED ?
YES
S7004
RETRIEVE BASIC APPLICATION
S7005
UPDATE APPLICATION LOG ACCORDING TO TEMPORARY LOG
END

FIG. 71

APPLICATION TYPE	BASIC APPLICATION CHARGE AMOUNT	CHARGE AMOUNT (YEN)							
		SUB APPLICATION CHARGE AMOUNT AT EACH BASIC APPLICATION PRINT							
		NORMAL PRINT	APPLICATION A	APPLICATION B	APPLICATION C	APPLICATION D	APPLICATION E		APPLICATION N
NORMAL PRINT	25440	...	30	0	975	0	0	———	0
APPLICATION A	21630	0	...	620	2040	1620	36	———	2480
APPLICATION B	5400	0	42	...	110	1512	0	———	0
APPLICATION C	55700	0	350	2040	...	0	918	———	1840
APPLICATION D	38880	0	0	990	50	...	48	———	1680
APPLICATION E	10026	0	315	1290	1400	68	...	———	2480
APPLICATION N	56960	0	525	0	1025	2808	576	———	...

FIG. 72

APPLICATION TYPE	NUMBER OF PRINT (SHEETS)
NORMAL PRINT	3180
APPLICATION A	1528
APPLICATION B	389
APPLICATION C	2449
APPLICATION D	1247
APPLICATION E	645
⋮	⋮
APPLICATION N	818

FIG. 73

APPLICATION TYPE	CHARGE AMOUNT (YEN)
NORMAL PRINT	25440
APPLICATION A	22892
APPLICATION B	10340
APPLICATION C	60700
APPLICATION D	44888
APPLICATION E	11604
⋮	⋮
APPLICATION N	65440

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FIG. 74

APPLICATION TYPE	TOTAL CHARGE AMOUNT (YEN)	DISTRIBUTION COMPANY'S SHARE (YEN)	PROVIDER'S SHARE (YEN)
NORMAL PRINT	25440	25440	25440
APPLICATION A	22892	12224	10668
APPLICATION B	10340	3112	7228
APPLICATION C	60700	19592	41108
APPLICATION D	44888	9976	34912
APPLICATION E	11604	5160	6444
⋮	⋮	⋮	⋮
APPLICATION N	65440	6544	58896

FIG. 75

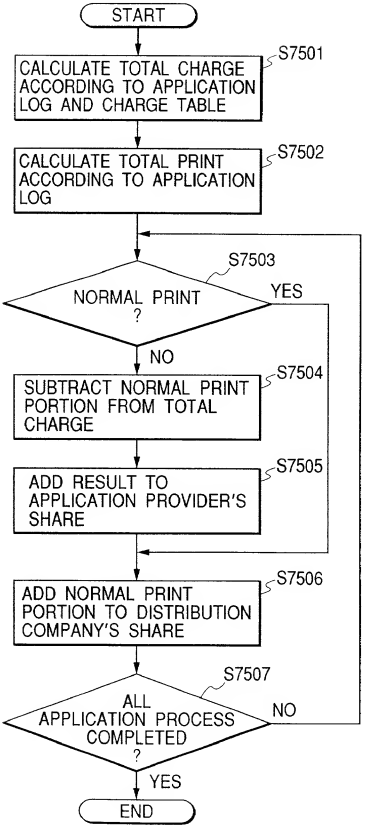
START
CALCULATE TOTAL CHARGE ACCORDING TO APPLICATION LOG AND CHARGE TABLE
S7501
CALCULATE TOTAL PRINT ACCORDING TO APPLICATION LOG
S7502
NORMAL PRINT ?
S7503
YES
NO
SUBTRACT NORMAL PRINT PORTION FROM TOTAL CHARGE
S7504
ADD RESULT TO APPLICATION PROVIDER'S SHARE
S7505
ADD NORMAL PRINT PORTION TO DISTRIBUTION COMPANY'S SHARE
S7506
ALL APPLICATION PROCESS COMPLETED ?
S7507
NO
YES
END

FIG. 76

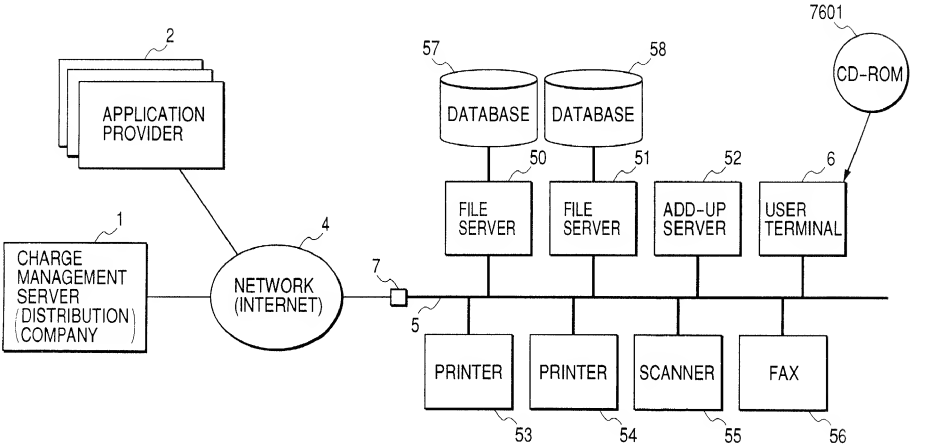
2
APPLICATION PROVIDER
1
CHARGE MANAGEMENT SERVER (DISTRIBUTION COMPANY)
4
NETWORK (INTERNET)
7
5
57
DATABASE
58
DATABASE
7601
CD-ROM
50
FILE SERVER
51
FILE SERVER
52
ADD-UP SERVER
6
USER TERMINAL
PRINTER
53
PRINTER
54
SCANNER
55
FAX
56

FIG. 77

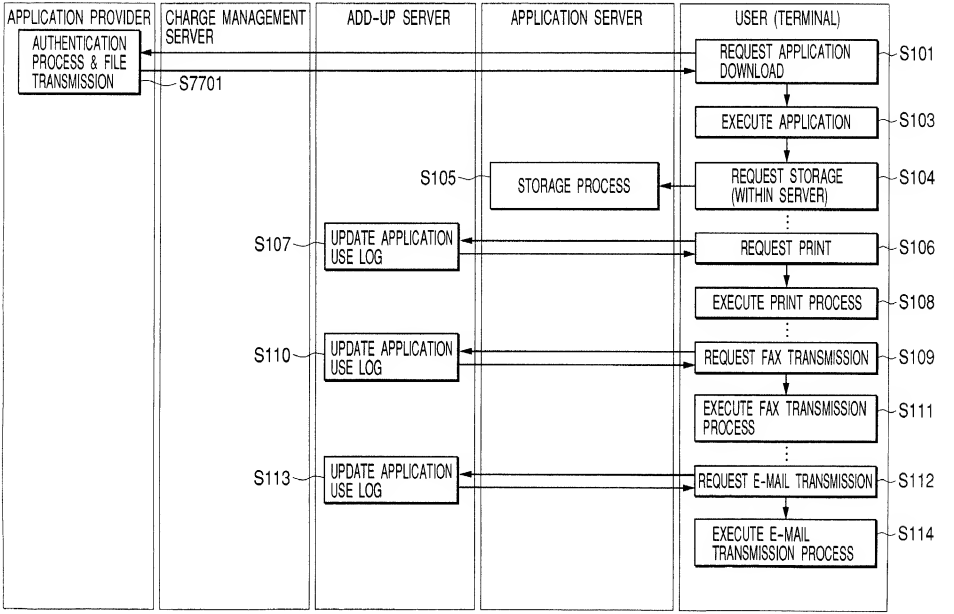
APPLICATION PROVIDER
CHARGE MANAGEMENT SERVER
ADD-UP SERVER
APPLICATION SERVER
USER (TERMINAL)
AUTHENTICATION PROCESS & FILE TRANSMISSION
S7701
REQUEST APPLICATION DOWNLOAD
S101
EXECUTE APPLICATION
S103
S105
STORAGE PROCESS
REQUEST STORAGE (WITHIN SERVER)
S104
S107
UPDATE APPLICATION USE LOG
REQUEST PRINT
S106
EXECUTE PRINT PROCESS
S108
S110
UPDATE APPLICATION USE LOG
REQUEST FAX TRANSMISSION
S109
EXECUTE FAX TRANSMISSION PROCESS
S111
S113
UPDATE APPLICATION USE LOG
REQUEST E-MAIL TRANSMISSION
S112
EXECUTE E-MAIL TRANSMISSION PROCESS
S114

FIG. 78

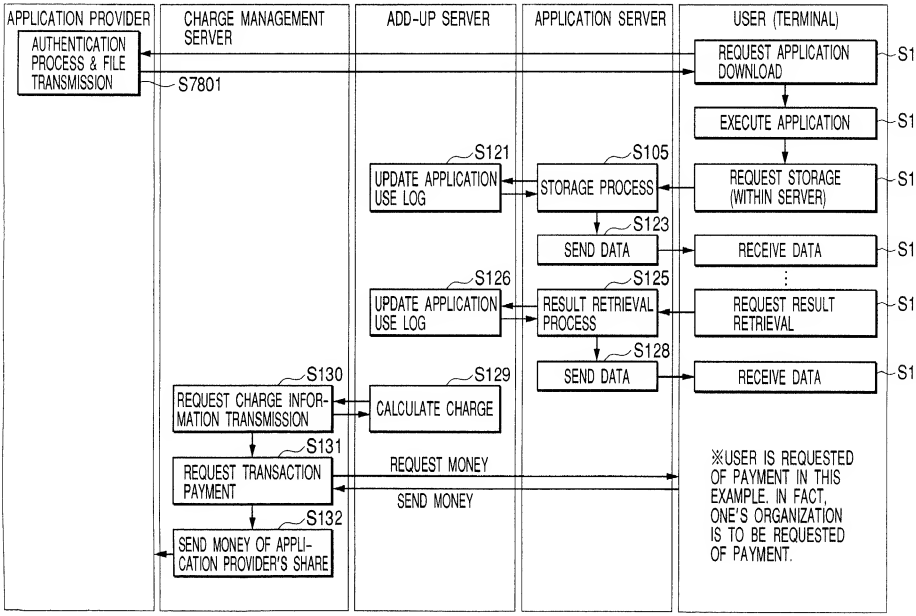
APPLICATION PROVIDER
CHARGE MANAGEMENT SERVER
ADD-UP SERVER
APPLICATION SERVER
USER (TERMINAL)
AUTHENTICATION PROCESS & FILE TRANSMISSION
S7801
REQUEST APPLICATION DOWNLOAD
S101
EXECUTE APPLICATION
S103
S121
UPDATE APPLICATION USE LOG
S105
STORAGE PROCESS
REQUEST STORAGE (WITHIN SERVER)
S104
S123
SEND DATA
RECEIVE DATA
S122
S126
UPDATE APPLICATION USE LOG
S125
RESULT RETRIEVAL PROCESS
REQUEST RESULT RETRIEVAL
S124
S128
SEND DATA
RECEIVE DATA
S127
S130
REQUEST CHARGE INFORMATION TRANSMISSION
S129
CALCULATE CHARGE
S131
REQUEST TRANSACTION PAYMENT
REQUEST MONEY
SEND MONEY
※USER IS REQUESTED OF PAYMENT IN THIS EXAMPLE. IN FACT, ONE'S ORGANIZATION IS TO BE REQUESTED OF PAYMENT.
S132
SEND MONEY OF APPLICATION PROVIDER'S SHARE

FIG. 79

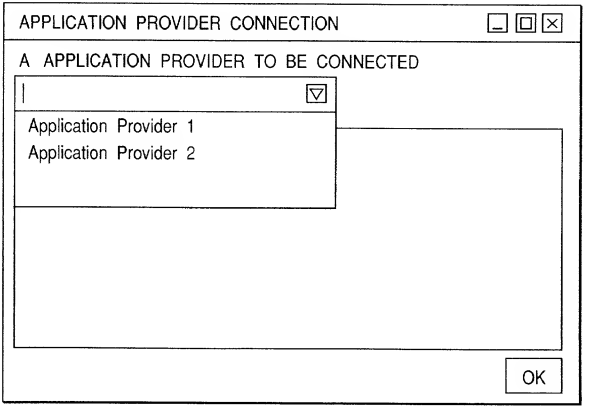
APPLICATION PROVIDER CONNECTION
A APPLICATION PROVIDER TO BE CONNECTED
Application Provider 1
Application Provider 2
OK

FIG. 80

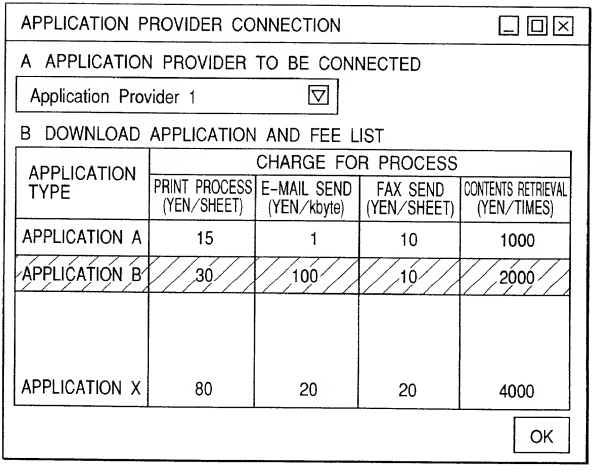
APPLICATION PROVIDER CONNECTION
A APPLICATION PROVIDER TO BE CONNECTED
Application Provider 1
B DOWNLOAD APPLICATION AND FEE LIST
APPLICATION TYPE
CHARGE FOR PROCESS
PRINT PROCESS (YEN/SHEET)
E-MAIL SEND (YEN/kbyte)
FAX SEND (YEN/SHEET)
CONTENTS RETRIEVAL (YEN/TIMES)
APPLICATION A
15
1
10
1000
APPLICATION B
30
100
10
2000
APPLICATION X
80
20
20
4000
OK

FIG. 81

APPLICATION TYPE	PRINT METHOD	CHARGE AMOUNT PER ONE SHEET (YEN)
NORMAL PRINT	–	8
APPLICATION A	PRINT METHOD A	30
	PRINT METHOD B	15
	⋮	⋮
	PRINT METHOD X	10
APPLICATION B	PRINT METHOD A	60
	PRINT METHOD B	30
	⋮	⋮
	PRINT METHOD X	15
⋮	⋮	⋮
APPLICATION X	PRINT METHOD A	160
	PRINT METHOD B	80
	⋮	⋮
	PRINT METHOD X	60

Updated Sheet

FIG. 82

APPLICATION TYPE	PRINT METHOD	NUMBER OF PRINT (SHEETS)
NORMAL PRINT	–	3501
APPLICATION A	PRINT METHOD A	20
	PRINT METHOD B	335
	⋮	⋮
	PRINT METHOD X	522
APPLICATION B	PRINT METHOD A	30
	PRINT METHOD B	678
	⋮	⋮
	PRINT METHOD X	836
⋮	⋮	⋮
APPLICATION X	PRINT METHOD A	7
	PRINT METHOD B	23
	⋮	⋮
	PRINT METHOD X	31

FIG. 83

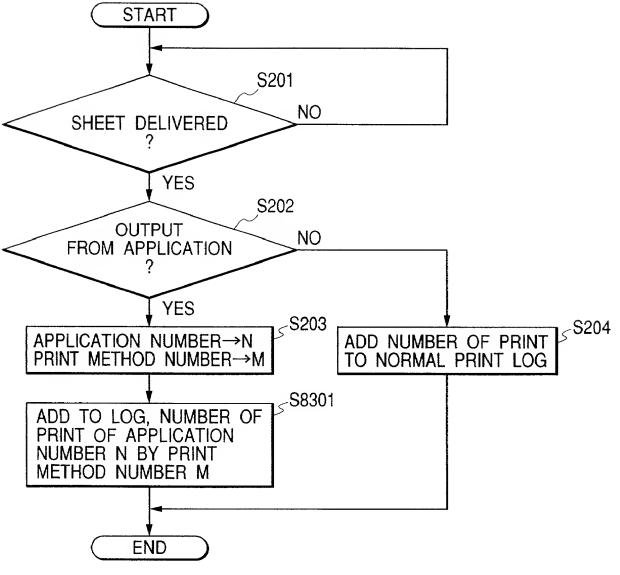
START
S201
SHEET DELIVERED ?
NO
YES
S202
OUTPUT FROM APPLICATION ?
NO
YES
APPLICATION NUMBER→N
PRINT METHOD NUMBER→M
S203
ADD NUMBER OF PRINT TO NORMAL PRINT LOG
S204
ADD TO LOG, NUMBER OF PRINT OF APPLICATION NUMBER N BY PRINT METHOD NUMBER M
S8301
END

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FIG. 84

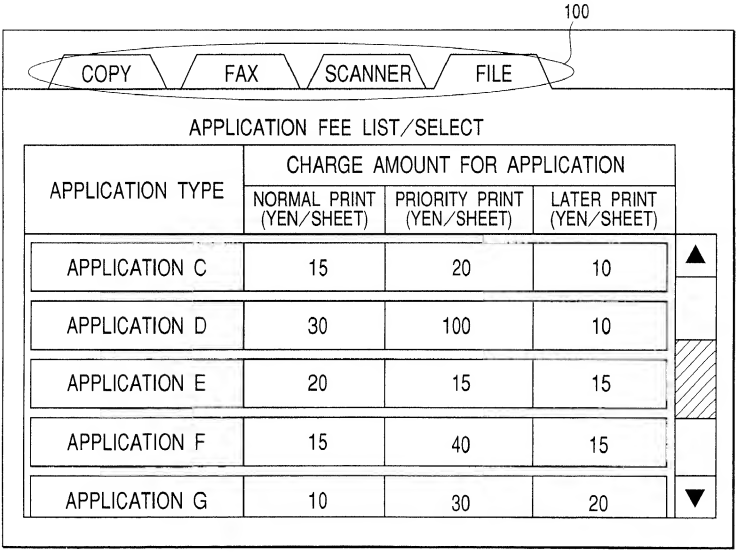

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FIG. 85

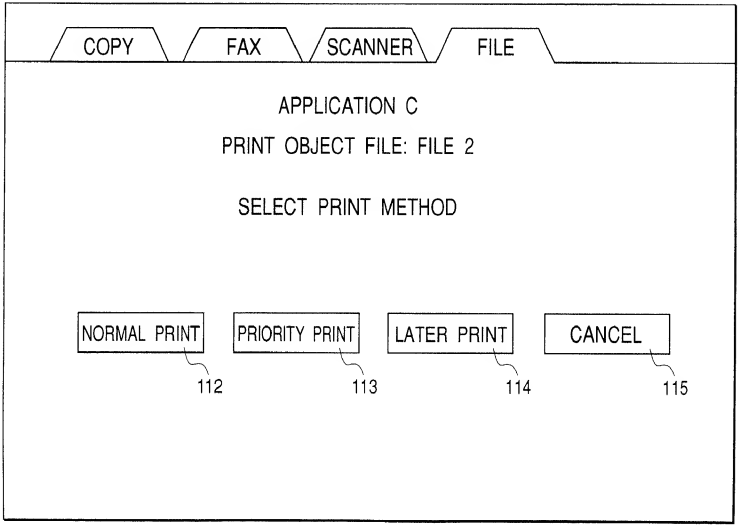

FIG. 86

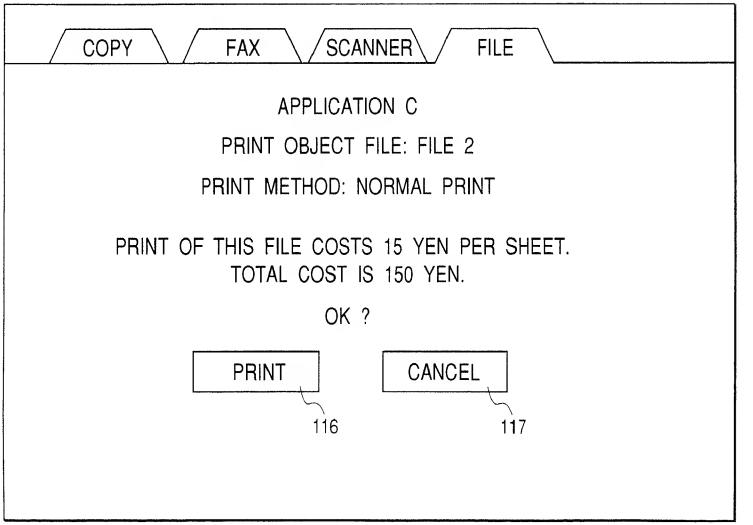
COPY
FAX
SCANNER
FILE
APPLICATION C
PRINT OBJECT FILE: FILE 2
PRINT METHOD: NORMAL PRINT
PRINT OF THIS FILE COSTS 15 YEN PER SHEET.
TOTAL COST IS 150 YEN.
OK ?
PRINT
CANCEL
116
117

FIG. 87

APPLICATION TYPE	TOTAL NUMBER OF PRINT	CHARGE AMOUNT PER ONE SHEET (YEN)
NORMAL PRINT	–	8
APPLICATION A	1–1000	30
	1001–2000	15
	⋮	⋮
	xxxx–	8
APPLICATION B	1–2000	60
	2001–4000	30
	⋮	⋮
	yyyy–	8
⋮	⋮	⋮
APPLICATION X	1–500	160
	501–1000	80
	⋮	⋮
	zzzz–	8

Entered Examined

FIG. 88

APPLICATION TYPE	TOTAL NUMBER OF PRINT	NUMBER OF PRINT (SHEETS)
NORMAL PRINT	–	3501
APPLICATION A	1–1000	21
	1001–2000	435
	⋮	⋮
	xxxx–	0
APPLICATION B	1–2000	0
	2001–4000	513
	⋮	⋮
	yyyy–	0
⋮	⋮	⋮
APPLICATION X	1–500	0
	501–1000	0
	⋮	⋮
	zzzz–	253

FIG. 89

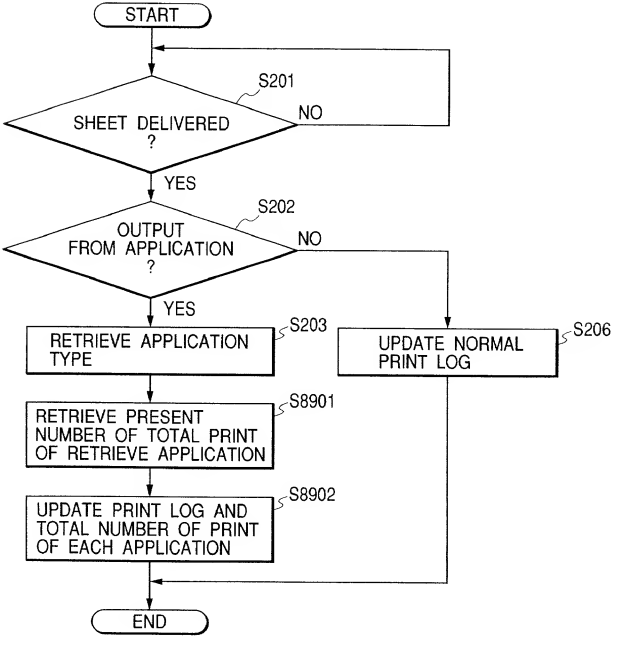
START
S201
SHEET DELIVERED ?
NO
YES
S202
OUTPUT FROM APPLICATION ?
NO
YES
S203
RETRIEVE APPLICATION TYPE
S206
UPDATE NORMAL PRINT LOG
S8901
RETRIEVE PRESENT NUMBER OF TOTAL PRINT OF RETRIEVE APPLICATION
S8902
UPDATE PRINT LOG AND TOTAL NUMBER OF PRINT OF EACH APPLICATION
END

FIG. 90

APPLICATION TYPE	TOTAL NUMBER OF PRINT	APPLICATION FEE FOR ONE SHEET (YEN)
NORMAL PRINT	—	0
APPLICATION A	1-1000	22
	1001-2000	7
	⋮	⋮
	xxxx-	0
APPLICATION B	1-2000	52
	2001-4000	22
	⋮	⋮
	yyyy-	0
⋮	⋮	⋮
APPLICATION X	1-500	152
	501-1000	72
	⋮	⋮
	zzzz-	0

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